THE

ADDRESS IN MEDICINE,

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WHEN the Council of the Association did me the honour of asking me to deliver the Address in Medicine, my thoughts naturally turned to the progress in the art of recognising, curing, and preventing diseases, which has taken place during the period over which my personal knowledge extends. I began to try and recall the medical practice of my student days, now not very far from forty years ago, and to think over the chief changes which have since occurred. I found the retrospect interesting, and, in the hope that it may prove so to others, I shall endeavour to pass in brief review the principal points in practical medicine which have seemed most to influence me during my medical life.

When I commenced attending hospital practice in 1836–37, the two great discoveries of the first quarter of this century—viz., Richard Bright's recognition of albuminuria, and Laennec's application of the ear to discover the normal and abnormal actions of the heart and lungs—had hardly made their complete impression on medical practice. The urine, indeed, was tested in every hospital, and the stethoscope was taught in every school, but we were still able to see something of the old practice, and to observe how great a change had been produced. Indeed, without a recognition of the state of the kidneys, diagnosis was little better than guesswork, and in many cases was impossible. Diseases, such as some dropsies and uræmic nervous conditions, ran their course without their nature being in any way detected. There were still some old practitioners who did not use the stethoscope, and were still obliged to rely on very uncertain indications when judging of heart or lung diseases. But everywhere these two grand advances were being diligently pushed on, and their extraordinary importance for the whole human race was recognised. By a little effort a student of the present day may imagine what a light the discovery of renal and auscultatory signs threw upon the chaotic practice of earlier times. Our every-day work became at once defined; indecision, the most harassing of our troubles, was replaced by certainty; symptoms thought to be identical were suddenly separated; what had been deemed important was seen to be useless; what seemed insignificant was shown to be full of meaning.

Nor has any advance since that time equalled these two great steps. To Laennec's work, indeed, as far as it concerns the interpretation of auscultatory phenomena, little has been added. The completeness of his investigation is nothing short of marvellous. Let anyone go over the diagnosis of the diseases of the thoracic organs in the ante-Laennec period, and then read his wonderful treatise; then let him look through the almost countless works since, and he will see how much was done, how little was left undone, by the great Frenchman. He never went wrong except when he left the interpretation of what he heard, and attempted details of morbid anatomy for which the time had not yet come. And if Bright's great work was not so complete, this was inevitable from the very nature of the case. He was not merely investigating the meaning of sounds which an especial instrument made audible—he was dealing with the most intricate changes within the body. It was impossible he should round off and make clear the signs of the several kidney-degenerations whose nature was not even suspected, yet all he did do was perfect. It is wonderful how little error of commission there is in Bright's essays. While Laennec, in his discussion on tubercle, wished to give a complete and exhaustive account, which he could not really do, and desired to bring everything into the narrow circle of a definition which really left half out, Bright kept to his facts. What he saw he stated, and, as far as the facts warranted, he interpreted; but he went no farther, and in this he showed a more philosophic mind even than the illustrious discoverer of auscultation.

These two great discoveries stand high above all that has followed, nor is it likely that equal advances will be made in this century. Laennec's work has been somewhat enlarged, and here and there corrected. Bright's albuminuria, like a newly discovered country, has been separated into provinces, surveyed, classified, and enumerated. The work is not yet ended, but I presume we see now its limits more or less distinctly, and can foresee the time when, for practical purposes, it may be considered to be thoroughly known.

The value of the discoveries which have since chiefly influenced practical medicine will be estimated differently by different persons. To my mind, one of the most valuable practical advances in the last thirty years is the discovery of embolism and thrombosis. The immediate effect on diagnosis was considerable. To be able to separate a class of apoplexy from other apoplectic cases, to recognise blockage of the pulmonary, the ophthalmic, and other arteries, was a great gain; but the indirect consequence of the doctrine of embolism—the recognition of the effect of minute capillary blockage, and of the transference of cells which were arrested in other parts, and give rise to growths there—has a still more important bearing. In the same way the doctrine of thrombosis—of so-called spontaneous clotting and arrest of circulation, and the mixed cases of embolism and thrombosis—has most important practical consequences, which are gradually becoming clear. In 1845 Virchow first got the hint for his great discovery of embolism, which he subsequently fully elucidated in his essays published in 1846 and 1848. Among all discoveries in pathology which have been made by the surpassing genius of Virchow (and he has touched pathology at all points, and never without adorning it), there is none more valuable than the recognition of embolism.

Another advance, which appears to me to have greatly influenced practical medicine, is of a very different order. The entozoic diseases of men have long been known; but the mode of access and the transformations of the entozoa have been only made out within twenty-five years. How marvellous they are—what light is thrown on obscure diseases by the tracing of the embryo or ovum through its different stages and hosts to its maturity in its last resting place—I need not say. The labours of Van Beneden, Küchenmeister, Leuckart, our own Cobbold, and many others, have given us a degree of certainty about these animals and the diseases they cause which was quite unlooked for thirty years ago. We now understand, and can therefore prevent if we please, not merely the common entozoic diseases such as tapeworms, round worms, and the like, but we see how to deal with such widespread maladies as the indigenous liver disease of Iceland, which has been traced to an echinococcus; as the chlorosis of Egypt, caused by the Dochmius duodenalis; and as the fatal trichina disease, which has doubtless been until now confounded with the specific fevers, and as the Bilharzia affection of Natal. The importance of recognising these diseases, of bringing them out of the domain of mystery into the light of common day, and of thus freeing the class they were mixed up with from a heterogeneous element which made investigation very difficult, is too obvious to need comment.

The latest contribution to our knowledge of entozoa is by no means the least curious. That a nematoid worm shall live in the blood of a man—shall multiply there, or at any rate somewhere in the system—shall be in such numbers that there must be many thousands at once in the body, is wonderful; but passing wonder is the fact that these thousands of active, living, feeding worms, seem to do little injury. Their discoverer, Dr. Timothy Lewis, of the Army Medical Service, has given evidence which proves that some of the persons infested with them must have had these worms for years, and yet not only live, but pursue their avocations, and are in the possession of fairly good health. How is it these thousands of worms do not cause blockage and obstruction? Why do they not take the nutrition the body ought to have? What becomes of them when they die and decay? for they must do so. Where do they decay? and in what way is the structure of the bloodvessels and other parts through which they pass influenced by their passage? What a number of singular points arise, for which further investigation must find an answer! The discovery shows us, at any rate, that the entozoic diseases are

not yet exhausted, and that many things must still lie over for those who have eyes to see and energy to use their eyes.

The recognition again of the diseases (chiefly of the skin) which are owing to cryptogamic plants, has had important bearings on practice; it leads at once, as in the case of the discovery of the itch insect in the last century, not only to the adoption of a local treatment of a special kind, but to the recognition of the method of spread, and to the means of prevention. At present the recognised diseases from the implantation and growth of plants have been chiefly those of the surface, or of what may be called the external passages, such as the stomach, throat, or bronchi, which are in communication with the air. But what shall we say of the researches of the last three or four years, which seem to trace so many affections, in part or wholly, to the influence of the bacteroid bodies, which at present we must call plants. Without venturing to decide what relationship the class of plants which, for convenience, are massed together as schizomycetes, have to the specific and infectious diseases, or to putrefaction, it seems clear that a profound study of them must be fraught with deep consequences to practical medicine. We are now certain that, penetrating from without by the surface of wounds, or more rarely by the intestinal surface, these minute cells, whose numbers are to be reckoned as untold millions, pass into spaces or blood-vessels (on the walls of which they colonise and live), or enter living cells, it may be wandered white blood-cells, and get carried to distant parts of the body, or grow in and block vessels and cause a sort of embolism, or adhere to, and grow on, the valves of the heart, and may in one way or another cause various diseases and complications, and in some cases originate a disease which is mortal within a few days' time. Without exaggerating the frequency or the importance of these "mycoses," we can yet feel sure that in this direction practical medicine is about to make another step, and that, as there is a "disinfecting surgery," so also there will have to be a "disinfecting medicine."

In a class by itself—for the recognised cause of the disease cannot, at present, be referred to any plant, though it resembles, perhaps, no common animal cell—must be placed the small cell which, by its extraordinary powers of growth and attraction of food, causes the painful and obstinate sores known in India and Syria by so many names. The Delhi or Damascus sore, the Aleppo evil, and other names have been applied to a disease which is spread over all the East, affecting men and dogs, and which, though not fatal, is yet in the highest degree harassing and discomforting. The discovery of the cause and its cure we owe to Dr. Fleming, of the Army Medical Service, and it is a good instance of the great use of the microscope in the hands of a competent man. Dr. Fleming found, as a constant element in these rodent ulcers, a small cell: its nature is quite doubtful; no kind of plant can be developed from it, and it is presumably of animal origin; it contains nuclei, and grows marvellously fast, though whether by cleavage, or budding, or exosmotic transit, so to speak, of small cells through its wall has not been made out. By pressing in and absorbing the nutrition of the skin, it soon destroys portions of the surface, and forms most unsightly and painful ulcers. That this cell is the cause has been proved by repeated inoculations. It is very tenacious of life, and resistent to chemical agents, hence the uselessness of the common plans of local treatment, which have been so repeatedly tried without effect. The only cure is at once to destroy the cell with potassa fusa. In a few days a sore which has been open and extending for months is cured as by magic. The cure is infallible, and if this plan of Dr. Fleming is carried out, he will have the merit of having at once obliterated a disease which has been a plague for hundreds of years, and neither spared the great Aurungzebe in his Hall of Paradise, nor the meanest pariah who was no more than useless dust beneath his feet.

The discoveries I have now referred to—i. e., embolism and the entozoic and microphytic diseases—exert at once a great influence, not only on diagnosis, but on treatment and prognosis. But to some the changes in the general doctrines of pathology in the last forty years will appear, perhaps, even more interesting. During this time we have learned partly to know the great class of degenerations with its two divisions—namely, degenerations which are simply the result of age—i. e., of the loss of the peculiar formative force, which first builds up, then maintains, and then finally dies out, and leaves behind it a tissue worn-out, effete, and useless; and degenerations which are the slow result of some excessively slight but constant failure in nutrition. Fibroid, fatty, and atheromatous changes and wastings, especially of muscular fibres, but also of gland-cells and mucous membranes and nerves, come in to complicate the acuter maladies, and largely to increase their mortality. It must be confessed that while they will account oftentimes for failures of treatment, the chance of degenerations being present in middle-aged patients is a source of great embarrassment in prognosis. Except when attacking the kidneys and the muscular tissue, they are diagnosed with great difficulty, and slow degenerations of the alimentary mucous membrane, or of the nervous system, are among the most puzzling of maladies. In the means of detecting the presence and estimating the amount of these degenerations we have still much to learn, and no greater benefit could be conferred on the human race than a perfect analysis of their causes, and a recognition of how they may be avoided.

The great subject of inflammation, which underlies so much of pathology, has suffered many changes, and yet the views held by some observers thirty years ago, at the outset of microscopical research, were almost perfectly true.

Thirty years ago the doctrine of the Vienna school, based partly on the teaching of Rokitansky, though never, I think, accepted as a whole by that great master, was dominant in Germany and in France. Everything was dyscrasia, and the belief that a profound alteration of the fluids, and especially of the blood, underlies most morbid changes, for a long time governed a large school of pathologists. In this country it has never obtained great weight, though it certainly tended to modify our ideas of the origin both of cancer and of tubercle. Gradually losing ground before the pressure of opposing facts, the doctrine of crasis at length gave way to a local pathology almost as extreme. The theory which superseded it was the celebrated cellular pathology of Virchow—that theory which looked only to the individual elements, which traced all to growth of cells, and which virtually rejected the idea of exudation in the old sense of the word. It was admitted, indeed, that nutritive fluid emerged in disease from the vessels as in health, but it was caught up and appropriated by the cells met with outside the vessels, and especially by the connective-tissue corpuscles. At one time it seemed as if the time-honoured term "exudation" would be banished from pathology, and the old doctrine of inflammation seemed altogether undermined. But this cellular pathology was, like the creed it superseded, pushed too far. True to a large extent, it was made to embrace conditions beyond it, and the inevitable reaction came. In 1867 Cohnheim described the transit of the white blood-cells through the unruptured walls of the capillaries, and the old doctrine of exudation had again an empirical foundation. I say Cohnheim *described*, but I did not say he *discovered*. For the discovery had long been made, and the fact that it had been made and had been disregarded is a striking instance of want of appreciation of a cardinal fact, of which so many cases are recorded in the history of all sciences. It is bare justice to record that in 1839 William Addison, now of Brighton, perfectly described the emigration of the white blood-cells, as well as many other phenomena which attend inflammation. The fact did not escape notice, and one writer at least—Charles Williams, in his well-known work on the Principles of Medicine—appreciated its importance. But as a practical matter the discovery fell dead, and when Cohnheim announced the fact twenty-eight years later the world of pathology was stirred to its depths. It is also but justice to observe that the chief microscopic phenomena of inflammation and the processes of stasis and exudation were nearly as well described twenty-five years ago by W. Addison and Williams as they are now, though certainly the proliferation of tissue-cells outside vessels was not known.

The pathology of inflammation seems settling down on a mixed humoral and solid basis. It seems to be admitted that the albumen in the blood which feeds the organs partakes of the quality of the food which supplies it, and is modified also by the condition of the organs, whose action prepares its introduction into the main torrent of the blood. Degrees of nutritive adaptability may, therefore, exist in it, and we may fairly assume that the composition of the blood albumen must vary, and that it is quite possible it may be some-

times so degraded as to justify the idea which underlay the Vienna doctrine of crasis. But it seems also clear that the main phenomena of nutrition (normal and abnormal) rest with the cells and with the ultimate molecules, so to speak, which, though without a cell wall, can be classed with cells. The cellular pathology is, to this extent, an undoubted and valuable generalisation.

If the doctrine of inflammation has thus, as it appears to me, made the full circle of change, the same may be almost said of phthisis pulmonalis. Laennec's genius, so sure and accurate when he was dealing with the interpretation of physical phenomena, failed when he attempted a definition of phthisis. Like many a geographer, he wished to fill up his blank map, to insert a coast line here and a watershed there, and to have everything defined, described, and completed. It was an impossible attempt, for the country had not been surveyed.

Laennec's opinions on tubercle were widely influenced by those of Bayle, and doubtless his interest in the subject was heightened by the fact that, like Bayle, he was himself the subject of phthisis. Influenced probably also by reflection on the hereditary derivation of phthisis, he at last elevated tubercle into a special and peculiar product, and as the only sign and cause of phthisis; he took tubercle out of the category of common inflammatory changes, and made, so to speak, an entity of what may be merely a form. His influence was so great, his hypothesis (for it was no more) so exactly chimed in with many of the facts of phthisis, and gave an explanation so simple and complete, that it met with general acceptance.

But in this country there were not wanting those who, from both clinical and pathological standpoints, never accepted Laennec's theory in its integrity. The masterly descriptions of Thomas Addison, of Guy's Hospital, published nearly thirty years ago, show how completely that great and original physician had seen the imperfection in the favourite view of tuberculosis. But Addison was not alone in this. It is but just to the memory of a man whose extraordinary talents did not save him from mistakes which eventually overshadowed a brilliant career, and left him in his old age neglected and stranded on the shallows whither a false light had enticed him; it is but just to John Elliotson to recall the fact that he constantly asserted the production of phthisis pulmonalis from common inflammation, and the identity of many so-called tuberculous and inflammatory processes. So also it is but justice to C. J. B. Williams, a pupil and follower of Laennec, to say that he also brought into great prominence the intimate connexion between inflammation and tubercle.

But it was not until 1847 that Laennec's theory in its exclusiveness was to receive its death-blow. In that year Reinhardt, himself, like Laennec, soon to be a victim of phthisis, published his exhaustive examination of the microscopical characters of tubercle, and asserted that there was no difference between tubercle and common inflammatory products.

Then, gradually, opinions seemed to settle down in three directions. There were some who held to the old theory of Laennec, that there was a specific tuberculous product or deposit; some who followed Reinhardt, that the deposit was of a common inflammatory nature; and some who steered between the two, and considered phthisis pulmonalis to be a generic term covering two, if not more, distinguishable morbid conditions. How we now stand in this matter it would be rash to assert, but it seems to me that the late able discussions in this country and in Germany tend more to the idea that the tubercular character is the consequence merely of an anatomical condition, and that the greater or less amount of lymphoid tissue in the lungs and the fact of its involvement will account for the peculiarity of form.

Time, indeed, has added two important facts to Reinhardt's masterly description: the one is the implication of the lymphoid tissue in the most typical form of tubercle, and the other is the demonstration of the infective character of phthisical inflammation, for which we have much to thank Villemin, Simon, Andrew Clark, Burdon Sanderson, Wilson Fox, and others.

There was a moment, indeed, when Villemin first announced the production of tubercle by inoculation, when it seemed as if the specific nature of tubercle might after all be true; but the researches in this country soon proved that the inoculation of many kinds of noxious matter might give rise to tubercle, and that there need not be anything special about the introduced starting point; and so tubercle has, perhaps, come to this, that it is merely a form of those common changes which are most conveniently grouped as inflammatory, with this addition, that the presence of a special structure impresses on it a special form. The tendency of inquiry seems to me to indicate that we must look to the anatomical condition of the bodily tissues, and especially to the abundance or special condition of the lymphatics in the lungs or throughout the body, to explain the hereditary nature of tubercle in certain cases, and also to account for those instances of general tuberculosis which formed the basis on which Bayle built up his hypothesis of phthisis.

But how in this whirl of controversy, in this endless assignment of names, and discussion of what these names mean—how has the practical physician who had to treat phthisis found his practice changed? In some ways favourably, in others, as I conceive, unfavourably. The principal change in the treatment of phthisis has been the introduction of the supporting plan, based on the idea of tubercle being the indication of a weak, morbid nutritive condition. Cod-liver oil, practically unknown in my student days, reintroduced in this country (after long years of forgetfulness) by Hughes Bennett, and tested by Charles Williams, has become an article of commerce on an enormous scale; good feeding in other respects, and exercise and pure air to improve the pulmonary circulation, are the main grounds on which many practitioners treat phthisis; so far, the effect of the view of phthisis to which I have referred has been most useful. But, in another aspect, I doubt whether we have not somewhat lost in the little attention paid until lately to the inflammatory conditions. Formerly there was a vast amount of local counter-irritation, and even local bloodletting, which certainly seemed to be very useful, and of measures used with the idea of removing exuded inflammatory products, such as the preparations of iodine and even mercury. There are many cases of phthisis which appear to be largely benefited by measures of this kind, or by a union of the two plans, and, in so far as the common notion of the peculiar specific nature of tubercle discouraged the use of anti-inflammatory measures in some cases, so far I conceive harm was done.

In two points late researches have, I think, influenced our view of looking at phthisis. In the first place, it has been shown how many cases of phthisis are caused by removable conditions: breathing of impure air, constrained positions, syphilis, &c., are now known to produce many cases of wasting lung diseases; and as it is possible to prevent these, and thus to lessen the prevalence of phthisis, we have now a greater element of hope than formerly. On the contrary, the evidence of the so-called infective nature of phthisis—that is, the way in which it can originate in the lungs from distant infected parts, the way in which it extends to adjoining parts, or, perhaps, to distant parts of the lung by absorption from a diseased lung centre, and thus returns and returns until fatal inroads are made on the organ or the system at large—the constant production, in fact, of fresh centres of spread—is a discouraging aspect. On the whole, the last thirty years have done much for the treatment of phthisis, but it is not all unmixed gain, and the amount of future progress is uncertain.

But I must pass from this subject of tubercle, which might occupy the whole address, to glance at a clinical advance which has done much to extend and to define our views on the great class of the specific febrile diseases. Forty years ago many of the peculiar diseases which, under the term epidemic, or endemic, or in late years zymotic, cause a large mortality among all nations, were well known, but a large class still remained misunderstood. I can confidently appeal to those of my contemporaries who studied in fever hospitals before the year 1840 to bear me out when I say that few points in practical medicine were more unsatisfactory than the diagnosis and treatment of continued fevers. We seldom had knowledge of what existed, and none of what was coming, and no prevision of what to-morrow might bring forth. The most unexpected turns occurred in different cases: sudden recoveries, sudden relapses, sudden gushes of blood in one case, sudden sinking, or coma, or convulsions in another. No practitioner ever gave more than an uncertain prognosis, for he did not know what

changes a day would cause, and the want of knowledge of morbid lesions sometimes led to the employment of improper remedies, such as the use of strong purgatives in advanced typhoid fever.

How wonderful is the change now. We can make in most cases of so-called continued fever a diagnosis as certain as in small-pox or measles; we know what to expect, and can indicate the limits within which the morbific cause acts. When I contrast this certainty with the vague, hesitating, conjectural diagnosis of former times; when I think also of the result of this accurate diagnosis—viz., a recognition of the mode and conditions of spread, a recognition which leads at once to preventive measures,—I begin to doubt whether, after all, this is not our greatest advance in practical medicine. Certainly in extent of consequences it stands behind few others. We all know how many men of many countries—France, America, and Germany—have contributed to this result; but I shall not be accused of national pride if I claim a large share of the honour for our own countrymen. A most active member of this Association—Dr. A. Stewart—was a very early pioneer in this matter; and to one of the greatest physicians of our time—to William Jenner—must be ascribed the immortal honour of the demonstration which converted dubious conjecture into certainty. The great work of Murchison has become the guide of every one, not only in this country, but abroad; for it has been largely translated, and has greatly influenced public opinion in Germany and in France. The researches of Mr. Simon and his able band of investigators have probed the causes of the fevers of England at every point; and, if allowed to guide the action of the State, it is not too much to say that the diseases which caused so great a mortality in times past, and which even now kill so many persons, will become things gone by, and as little known in England as leprosy or plague.

Enough has been done in the case of all those diseases to show us how we must act in preventing or in healing them; but I cannot avoid a reference to the inquiries now going on respecting the causes of the so-called specific diseases.

It is now more than thirty years ago that a physician of singularly penetrating and philosophic mind, one of those men who influence less their contemporaries than their successors, wrote a work of remarkable power. Gathering up from all sides the numerous observations whose significance became apparent only when they were brought together, Robert Williams, of St. Thomas's, first gave, in his work on "Morbid Poisons," a clear demonstration that the several epidemic and contagious diseases must own separate and specific causes. How gradually this belief has gained ground until it is held by most persons, I need not say, nor how it bears at once on preventive measures. In all these epidemic diseases we now, or, at least, most persons now recognise that there is a material cause, that conditions of meteorology, such as heat, moisture, and the like, or conditions of season or locality, or states of the human body itself, are merely additions which influence by aiding or retarding transmission or growth. In this belief, logically born of facts, which is no dream or invention, but a plain deduction, we have a solid ground for action. If material, those causes must enter the body through some channel by the agency of some other substance—by the aid, that is, of air, of water, or of food, or by broken surfaces of the body. By this conception of the "morbid poisons," to use his own term, Robert Williams marked off a great class of febrile diseases from those which might be produced by alterations in meteorological conditions, by excessive radiant heat, or intense electrical conditions, or parched and burning air, all of which may cause febrile symptoms. He thus simplified and defined, and cleared the ground for future inquiry. But it must be confessed progress has since been slow. It was at once seen that if the causes of the epidemic diseases be material, they must come within the scope of modern instrumental inquiry. Either by chemistry, or by microscopical research, it was hoped that they would be seized and recognised and made to give up the secret of their birth, parentage, and power. But it was not known how far behind the delicacy of the problem were the instruments of the day. The recognition of these agents is evidently a task more difficult than to seize and decompose the light of the planets or the dim luminosity of the nebulæ. At present inquiry has carried us to the very threshold. How long will it be until some one opens the door and bids us enter? In the face of so subtle a point, and so many differences of opinion among the best microscopists, I fear to prophesy; and when Beale takes one side and Ferdinand Cohn another, he would be a bold man who would decide between them. But I think we may safely say that the sap has been carried up to the very wall of the fortress, though how long it will be till the final assault is delivered it would be rash to say. One may conclude, perhaps, that the problem in question is not a simple one, like trichinosis, for example, where it is simply the entrance into the body of an animal with extraordinary powers of multiplication and penetration, but that in the case of the specific diseases we must not only have determinate breeding places in the body, but also possibly special conditions of nutrition, without which the agent cannot increase and cannot recur.

Closely connected, again, with this question of the nature of the agents which produce small-pox, scarlet fever, measles, typhus, and enteric fever, or other infectious diseases, is that of the causes of septicæmia. I cannot tell in what light the observations of Coze and Feltz, of Klebs, or von Recklinghausen, or Burdon-Sanderson, Klein, and others, or the singular success of Lister and his antiseptic treatment, based on the germ theory, may appear to others. To me they seem in the highest degree important. To refuse them credence, or to pass them by as immaterial, seems to me about as philosophical as it was to discredit Jenner because the protective power of vaccination seemed at the time so improbable; the rapid multiplication of bacteroid bodies, their colonisation and emigration, the effects they produce by pressure, blockage, and embolism, the changes they cause in the white blood-cells and perhaps in the albumen and fibrine, the disintegration of the white blood-cells, and the fibrillary deposits in the vessels, are all phenomena which can be shown. Can these things be without importance when they not only are real but agree so curiously both with the symptoms of septicæmia and with the most successful treatment of surgical injuries? It does not follow that we have got to the bottom of the question; but surely we have made a step, and that no trifling one, in learning one aspect of "blood-poisoning"—a term true, yet vague; useful, indeed indispensable, yet not satisfactory, because, for the most part, representing only a haze, and not an outline.

But I must pass on to notice the changes in one other branch of pathology. About forty years ago the diseases of the nervous system were very little known. The great discoveries of Bell, and the physiological and microscopical observations of Germany, were gradually clearing the subject. At the commencement of the period Marshall Hall was completing his observations on reflex action, and launching into that bitter sea of controversy which poisoned his own happiness, and overshadowed the fame which was justly due to him. That he owed much to his predecessors, that he was not careful enough to acknowledge it, must be admitted. But the work which he did was yet real and true work, and his name can never be deposed from its honourable niche in this part of pathology. Then followed in quick succession the discovery of the governing power of nerves over contraction of vessels and over the work of the glands and the secretions of membrane. Then microscopes and experiments together paved the way for a proper understanding of the parts of the cord, the effect of section or injuries. The recognition of nervous centres; of the comparative independence, so to speak, of ganglia; of the effect produced on their centres by reflex irritation and by direct irritation by the circulation of poisoned blood: all these and other similar discoveries have occurred in thirty years. Consequently, with much that is still vague, nervous diseases are no longer the hopeless medley of my student days. The recognition of locomotor ataxy and of other paralyses is a step of immense magnitude; but far more than the mere diagnosis of any pathological state is the fact that the physician has now the condition of the nerves ever in sight, and can to a certain extent explain that heterogeneous group of symptoms which, under the name of sympathies, or sometimes metastases, were so great a puzzle to our fathers, and can also see to some extent the cause of those convulsive affections which are attended after death by no physical change we can at present appreciate.

In many other directions practical medicine has also made

progress. Diseases of the larynx are now seen, and not guessed at; internal conditions of distant organs like the kidneys may be disclosed by an examination of the eye; the microscope in many ways gives us information about blood, sputa, urine, which one wonders how our forefathers could do without; instruments to extend or perfect the senses, to aid touch like the thermometer, or sight like the microscope or laryngoscope, or to show movements like the sphygmograph, are now in constant use, and the senses are multiplied a hundred or a thousand fold by their aid. Precision and mechanical accuracy are the aims of everyone, and exactness and thoroughness are becoming more and more the rule from year to year.

Here, then, I must bring this part of my long, but yet too brief, review to a close. It chronicles, I cannot but think, an immense forward movement in practical medicine; but if time had permitted me to go into details, or into a fuller examination of certain parts, I should have been able, perhaps, to bring out the matter more clearly and more completely. But I have said enough to show that we have not stood still, that few subjects can boast more original investigations, and that, in spite of great difficulties and oftentimes great differences of opinion, the general knowledge of practical medicine has advanced continuously and has advanced greatly.

But now will occur to all the question which is the touchstone of all progress: Have we gained in useful power by this knowledge; do we cure, do we prevent disease more easily and more perfectly than our fathers, or is this knowledge barren, a false light, like that picture by Milton, making only darkness visible, and showing us only that we are helpless?

We must all, I think, acknowledge that therapeutics form the most difficult part of our work, and that it is only slowly that the discoveries of pathology become worked into our daily practice of healing. At first, indeed, pathological discoveries may even perplex therapeutics, and many of us can remember what scepticism (scepticism which was untrue and hurtful) seized many people when the profound alterations of tissue produced by disease were first clearly seen. The reparative powers of nature, the wonderful agencies of drugs, were alike thought to be useless in the face of such profound disorganisations; and at one time it seemed as if the physician's art was to be reduced to a useless diagnosis —useless because sterile of results; but this was a phase merely, and no period has witnessed so many new and useful drugs added to our pharmacopœia, and so much more knowlege of their use, as the last twenty-five years. The essential distinction, however, between the old and the new practice arises, I conceive, from a difference of method. Forty years ago it was only in a comparatively small number of cases that a practitioner could make an accurate diagnosis. For the most part he took note of the prominent symptoms and treated them; he looked especially to the general condition. The first thought of many men was whether the patient was plethoric or the reverse; whether he was to be reduced or sustained. I knew intimately a physician who was most successful in his treatment, and who always, when he could not determine the disease, put this question to himself: "Which of these two courses must I take?"—and if he thought the patient required reducing, he bled and gave aperients and diuretics, and restricted the diet; if he thought the patient anæmic and in bad nutrition, he gave good food, bitter tonics, and iron. It was astonishing how many of those ailments which we all know are difficult to bring under a determined category were cured by this simple plan when judiciously carried out, and how much benefit was done even when no diagnosis had been made out.

Other men, when a diagnosis was difficult, invariably followed the eliminating plan, giving aperients and acting on the skin and kidneys, and then, after a time, changed the plan and gave tonics and iron. Dropsies were treated by digitalis or purgatives or diuretics, without reference to their cardiac or renal cause; cardiac palpitation was treated by rest, blisters, and opium, no matter whether it owned neurotic or organic cause; dyspeptic symptoms, however arising, were treated by prussic acid (then lately introduced by Granville, and made popular by Elliotson); vague, uncertain symptoms which could not be referred to their source were often combated by a succession of remedies termed "alterative," the main drugs being purgatives, and then mercury, iodine and antimony, and neutral salts. On looking back as well as I can to what I can remember of the practice of my early student days, it seems to me that a vast amount of good was done by men whose diagnosis we should now look upon as very incomplete. That much was left undone we must allow; but even now there are many cases in which we have to fall back on such a general plan as I have referred to, and often find our cases benefited.

There is, of course, no doubt that, among the measures resorted to in those days, depletion was far more commonly practised than it now is. It was of daily occurrence to bleed, and often to bleed largely, and there can be little doubt that the plan was pushed to excess, especially in the period from 1820 to 1840. But I think it would be a mistake to suppose that all practitioners used depletion so largely as is commonly supposed. Some men, like Broussais in Paris, partly from a theory, partly from opposition to others, were bleeders on a scale of magnitude we now shudder at, and even in this country there were men who were followers or rivals of this great Sangrado. But the generality of practitioners practised small bleedings, and seldom carried them to excess; in fact, at one time bleeding was so little used that the head of the Naval Medical Department issued instructions to his surgeons to make more use of the lancet. A great change has now taken place, and the lancet is seldom used, and the time-honoured practice of cupping is almost a thing of the past; and this, in my view, has not arisen from any change of type, of which I can see no proof, but to an improvement in diagnosis, and a more direct mode of treating disease. But I am disposed to agree with some of our best practitioners, who believe that we have too much abandoned an agency which, when well used, is often powerful for good, and that it is not unlikely the pendulum may soon commence to swing the other way, though not, we may hope, ever to reach the extreme point which some of us can remember. In the present day our practice is, I conceive, differently conducted. Our first thought when we investigate disease is to know precisely the parts affected, to estimate the amount of local injury, and to determine the effect produced on the constitution at large by the abnormal condition. We aim at a diagnosis as accurate and large as possible, and, though this is not always practicable, I think all will allow that there is a considerable degree of certainty. Then, being better acquainted with the course and tendencies of the special condition, we are able to form a better judgment of what is likely to take place, and how it is to be combated. Of course, a vast deal of our treatment is still empirical, and no doubt will be so for many years to come, and oftentimes we must fall back on general rules, and treat a constitutional condition without recognising its cause. But, on the whole, we diagnose, I conceive, fairly, and have a tolerable knowledge of how the state we discover can be best dealt with.

If, as I believe, the art of cure has really advanced greatly in the last forty years, the art of prevention has also made great progress, and this has directly arisen from the improvement in diagnosis. The recognition of a disease, and its reference to a particular category, inevitably lead the mind to probe its causes. This seems an instinct of our nature, probably divinely implanted to impel us in the path of knowledge and improvement. We cannot rest satisfied with seeing the thing; we must know its origin. Hence, during the last forty years, has arisen the school of the Sanitarians, whose creed is that every disease, as we see it, has its antecedent, and that the problem they have to solve is to reach this antecedent, and to prevent the seed from bearing its fruit.

Either in the action of external nature, or in social habits, or in nutritive conditions, or in conditions proper to the individual, and arising from his mind or mode of thought, the seeds of the diseases are sought, and by degrees the conviction is gaining ground among all classes that we have ourselves to thank for a large number of those maladies which destroy health, embitter life, and rob us of the blessings which we feel ought really to be ours. I need not say to what proportions this belief has grown, and how it is beginning to affect every class in the community; but it is only right to point out how directly it springs from the progress of medical science. Let us hope that, as preven-

tive medicine is really the child of curative medicine, and is indissolubly linked to it, those who are conducting the vast plans which the Legislature has devised for improving the national health may remember that the profession which has so far searched out the causes of individual and national ill-health must be entrusted both with the execution of the plans and with the continued search into a subject which is yet almost in its infancy.

And now, gentlemen, I have passed in review, far too briefly, the points which appear to me most interesting when the eye glances back over the varied, smooth and rugged, light and dark, fertile and sterile regions which a man passes over as time carries him, but too quickly, from youth to age. To me the retrospect is cheering; it has given me fresh hope for the continued advance of our knowledge, and for the progressive usefulness of our profession. I feel, as I have lightly passed over the records of the profession's work and gains in the last forty years, that we have played no unworthy part in the great drama, and that among the restless activity of modern times and the growth of newly-born sciences, an old art has not stood still, but with ever increasing power is still, as it has always been, a very present help in time of need.

THE

ADDRESS IN SURGERY,

Delivered before the Annual Meeting of the British Medical Association, at London, in August, 1873.

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THE responsible position in which I find myself to-day of delivering to an audience so important an address well worthy of more able powers, and upon a subject which might challenge the highest surgical intellect, has come upon me at short notice as the "proximè accessit" to one whose eminent reputation as an author and teacher of surgery had entitled him to the first place in your consideration on an occasion like the present. The indisposition which led to this, I fear, somewhat unsatisfactory alteration in the programme of our proceedings will, we all hope, be but temporary in its nature, and will entail upon him no consequences more painful than your disappointment and his own, and upon me, I may venture to add, nothing more disadvantageous than those comparisons which you may not be able to repress, and which the very short time given me to prepare has not enabled me, I feel very conscious, to diminish, except through an appeal to that liberality which is rarely wanting in our common profession. A stimulus to increased mental effort (of which your professional experience will well enable you to estimate the value in critical cases) was supplied to me by the knowledge of the place in which we were to assemble, and the feeling which I entertained of the great worthiness of the occasion. Within these walls, and under these auspices, I could not refuse to tax my powers, and even to risk that suspicion of temerity which may be attached by some to the undertaking. And may the omen, gentlemen, also dispose you to a lenient judgment of my shortcomings.

On the occasion of the visit of so many leading provincial surgeons to our great metropolitan centre it would seem to be incumbent upon me to allude especially to subjects which chiefly occupy attention at the present time, and upon which the foremost minds throughout our own country and the civilised world are now employed, and I do not hesitate to say, as successfully employed in the provinces as in London, and in our country as in any part of the world. Time will not permit me to give more than a glance at some of these topics, several of which are indeed dealt with in papers to follow the present address much more in detail than I can hope to do.

The present state of surgical knowledge indicates quite as much as any department of human progress that thorough movement in the dry bones of systems and creeds, which, we may be allowed to hope, is the prelude to more perfect construction, to lines of development in directions better adapted to the amelioration of human woe, and the more universal extension of that contentment which comes from clear knowledge of what we can and ought to do. As our notions at present stand, or rather, I should say, are in constant to-and-fro movement, it requires the exercise of a shrewd judgment, acting upon the leverage of an extended acquaintance with facts, and in many cases a very delicate balance of opinion indeed, as to what is the right thing to do. The prime wisdom is now even more than in Milton's days—

> "Not to know at large of things remote
> From use, obscure and subtle, but to know
> That which before us lies in daily life."

The multitude of counsellors and their diversity are so great that a surgeon can find authority for almost every variety of opinion and practice. And I believe that no opinions which are honestly advanced, and with due regard to the elements of truth and probability, will remain long without supporters even in the living generation.

In medical science, gentlemen, we have no pope and no shibboleth. Our councils are liberal assemblages, such as that we form to-day, and our appeal lies to an educated jury—the public opinion of the profession; and this jury, moreover, is fortunately by no means compelled to be unanimous in its decisions; and, if by reason of great originality, or of that sort of miscarriage which is not uncommon in the production of men of genius—namely, that of being born before his time—a man's views and deeds are not rightly estimated by his contemporaries, there still remains that ultimate appeal to the judgment of posterity which the possession of a free press and the facility of publication places within the reach of every one.

It is no wonder that those who have lived to see the rise and fall of many theories and many systems, are tempted to become converts to the doctrine of finality, and to consider it very probable *a priori* that whatever is new is therefore not true; and, if by any chance it should happen to be true, it would certainly prove not to be new. But when this frame of mind grows upon us, it is well to consider that our past was once a future, and had a more undeveloped past before it, and that the old ways have been led up to by ways still older, and, no doubt, worse to travel over.

The study of pathology and the natural history of disease has been leading to a simplification of medical treatment which has in some quarters advanced to the extreme phase of the "expectant" system, with little to minister to save the primitive necessities of food and regimen, comforted by faith, and supported by resignation. In the present condition of public intelligence, almost totally ignorant of the laws of health and disease, there is required an amount of natural gifts which is not conferred upon every man, to inspire in the patient such a robust quality of the former blessing as to enable him to nourish the latter upon so simple a thing as orange-flower water. While we are looking for the coming rain-cloud, which brings relief to, or release from, suffering by the operation of laws of which we know more or less perfectly the course and certainty, but which our patient cannot see, it is but natural that he should speculate from our conduct upon the perfection of our eyesight. The talented author of "Middlemarch" has fairly recognised the ideas which prevail in what truth compels us to call the greater portion of our population, in Mrs. Mawmsey's remark upon the new medical light, who had appeared in her native town, and who, as she was told, went about saying that physic was of no use. "Does he suppose that people will pay him only to come and sit with them, and then go away again?" Such are the intelligences that a doctor has even now far more frequently to deal with than those of Mr. Trumbull's calibre, who characterised himself as "one who was not altogether ignorant of the *vis medicatrix*," who went without shrinking through his abstinence from drugs, much sustained by the application of the thermometer, which implied the importance of his temperature, by the sense that he furnished objects for the microscope, and by learning many new words which seemed suited to the dignity of his secretions.

In the practice of surgery we meet happily with fewer difficulties of this kind than in the sister art of medicine, but occasionally, in obtaining the advantages which result, especially in cases of joint diseases, from the intelligent application of the principle of "rest" so conclusively set forth by our distinguished President of Section, Mr. Hilton, we have to contend with the impatience of the patient or his friends, and perhaps may even fall into the error of giving too much of a good thing, and thus may reach, not the "be thankful" condition, but the consequences of fibrous anchylosis. Here we may have the ill-luck, too, to leave our patient open to the temptations of the quack bone-setter's reputation, lately subjected to the serviceable exposure of Dr. Wharton Hood. This last infirmity of long-suffering patients applies his material force upon the hit-or-miss principle, and, hey presto, the bone which had been "put out" is set with an audible snap, which proves the evident correctness of the remarks upon the numerous fallacies of the faculty, with which he improves the occasion, and piles up the agony of his *éclat*.

In face of the latest developments of surgery, it becomes more and more difficult even to conceive the opinion of the eccentric veteran surgeon Vincent, "that it was doubtful whether the human race would be worse off than it is if there were no doctors, no accoucheurs, no physic, and no instruments at all." The utter extinction of the weak and sickly might indeed improve the race physically, if not numerically, as we see in the New Zealanders, but, as in them, it would in the meanwhile press very hard indeed upon individuals, and ultimately improve the whole tribe off the face of the earth. In a civilised community, hard-heartedness and cruelty are so abhorrent, and the instinct to heal and to relieve pain is so deeply inrooted, that a reaction against this law of neglect would infallibly reproduce that kind of superstitious remedy which has already caused in the world's history more pain and mischief than it has relieved. In this respect it resembles that instinct of religion with which it was so closely interwoven by the greatest exemplar of both.

We could no more prevent the growth of doctors than of preachers and moralists. The noblest function of the wisest among us is to enlighten and guide this innate impulse, to keep it under the control of the cool, reflective intellect and of the tender conscience, to prevent stagnation and the crystallisation of ideas into fixed dogmatic formulæ, which hinder development in science and art as well as in language and literature, and to maintain the honour and true interests of the profession. There is no better way of doing this than by the promotion of friendly intercourse among its members, and these I take to be the aims of the great Association under whose auspices we meet to-day. In the selection of my subjects I am naturally disposed to take those to which my attention has been most practically directed since the last meeting of the Association. I shall thus speak, and I trust that my audience may listen with that interest which attaches itself to subjects of actual experience.

Pyæmia, septicæmia, and erysipelas are undoubtedly the greatest troubles of modern surgery. Without their baneful influence the success of our improved methods would be enormously increased. By their occurrence the best-laid plans go wrong, and may end in the death instead of the restoration of the patient; and this is more deplorable when, as often happens, the operation is one which is not absolutely necessary to save life, but to remove a disability which might be an ill "better to bear than fly to others that we know not of." When, therefore, a system of dressing wounds is brought before us, sanctioned by worthy names and supported by the results of cases, which offers to us a means of escaping these terrible enemies, it is our bounden duty to give it a fair and full trial.

Such is the antiseptic system of dressing wounds originally developed by Lemaire in 1860 and 1865—thus adding one more to the many benefits which our coal-fields have conferred upon humanity in the use of coal-tar, and its derivative carbolic acid, as an application to wounds. As long ago as 1815, French chemists had proved the antiseptic qualities of oil of tar. As long ago as 1834, Runge discovered carbolic acid and its properties. Such is the slow growth of real improvement. Coal-tar itself, made into an emulsion with saponine by Lebœuf, and combined with plaster of Paris by MM. Corne and Demeaux in 1858, has continued to be used by French surgeons, and has lately been employed in combination with charcoal by Beau, of Toulon ("Du Traitement des Plaies," Baillière et Fils, Paris, 1873). A great impulse was given in this country to the use of carbolic acid, combined with the exclusion of air, by Professor Lister, in February, 1867, as is well known to the Association from its exposition by that talented surgeon at the meeting at Plymouth. Since that time, in common with, I believe, many London surgeons, I have given his system, I hope and believe, a fair trial at King's College Hospital. At the same time, side by side, and under the same conditions as far as could be obtained, I have employed the solutions of carbolic acid in oil and water, and those of other antiseptic substances, such as chlorozone, metallic salts, &c., as a dressing, but without the elaborate attempts to exclude the unpurified atmospheric air which Lister deems essential.

I shall not attempt, gentlemen, to discuss the question of atmospheric germs, or of in-dwelling bacteria-like bodies and their influence upon disease. This question is one of a far wider nature than can be conveniently discussed here, and it includes many other departments than that of surgery. In common with, and in relation to, the question of suppuration in general, and its connexion with tubercle, it can only be solved by the prosecution of those lines of research in pathology and medicine which have been followed so skilfully by Drs. Burdon Sanderson and Wilson Fox, and which are, I believe and hope, proving to be lines which converge towards an important discovery. As an experimental and scientific mode of research, which may turn out to be also a converging line in surgery, I have the highest possible respect for Prof. Lister's system of treating wounds. Upon his theory of germs it is consistent and simple enough; but it is as a practical method of treating open wounds, available under ordinary circumstances in hospitals and private practice, in emergencies, and on the battle-field, that it must be estimated and ultimately take its place; and it is with that view that I have put it as far as possible to the test. I began it at a time when the hospital was in a good hygienic condition, and the cases for that time did admirably. I had some cases quite equal to any described by Professor Lister himself. I at the same time tried the application of dry lint, without any moisture whatever, to the wound; and in many cases, especially in breast cases, the results were also perfect. In one breast case union by adhesion occurred throughout the wound. I also tried the application of the chloride-of-zinc solution in the manner originated by Mr. De Morgan, and very good results ensued —viz., healing with the formation of little or no pus. After about six months there came into the hospital—and, from inquiries made at the time, I concluded that a similar condition prevailed in most or all of the London hospitals—a very unfavourable change. Erysipelas and its concomitant pyæmia began to show themselves, the former not springing up in the hospital itself, but imported with patients. The wounds now began to suppurate more, primary healing was less common, and the erysipelatous blush appeared with blameworthy impartiality in cases treated in all kinds of ways, and almost as impartially on my own antiseptic side of the hospital as on my colleague Sir William Fergusson's non-antiseptic side. But this I feel bound to say, that there was little or no putrefaction, as evidenced by the odour, in my cases, which my eminent colleague shrewdly attributed to the carbolic smell overpowering all others. Upon this point, however, I must say I did not agree with him. I had one case of amputation of the thigh for a tumour of the lower end of the femur, in a man of about sixty. I treated it by Lister's method, carefully carried out, and from beginning to end there was very little discharge and no putrid or offensive smell whatever; but the wound did not heal, the end of the bone remained inadherent and devoid of granulations, and the man lingered for two months in a declining and emaciated state, and finally succumbed to chronic pyæmia, with secondary abscesses in various parts. The occurrence of many other cases similar in character has convinced me that the agencies, whatever they are, in pyæmia, operate in the general system, or, if through the atmosphere, in other channels besides the wounded part, as in cases of pyæmic poisoning from deep internal glandular pus-deposits, and in other acute and chronic tubercular affections.

Some time afterwards I had a case of compound fracture

of the tibia and fibula, with a limited aperture in the skin, in a man nearly seventy years of age. I put it up carefully on Lister's method, carbolic spray, prepared gauze, and jacquinette, complete. On dressing it several days afterwards, suppuration was found to have occurred, and the pus had accumulated considerably in the dressings. The treatment was continued, and kept the wound free from all unpleasantness, but still the amount of suppuration was very considerable. There was burrowing of pus along the muscles and bones, and a total want of union. In this case I was ultimately obliged to amputate below the knee. The amputation wound was also treated antiseptically, but still the amount of pus was considerable; and, although from the man's age and reduced condition the progress of healing by granulation was slow, the case did exceedingly well, and made an excellent stump.

In some cases of psoas abscess treated by Lister's method we had marked success, so long as the hospital was healthy. When erysipelas and pyæmia appeared, however, we had others in which the pus in the abscess became putrid and offensive after the first evacuation under the spray and with all the precautions, and I was obliged to make free openings and introduce drainage-tubes, through which the abscess could be washed out thoroughly with antiseptic or carbolic lotion. My cases convinced me that we could not without danger depart, in the generality of wounds, from the old rule of providing a free exit for all purulent and offensive discharges, and, for the want of this, the exclusion of air is not a sufficient compensation.* I cannot, consequently, approve of the plans originated by Baron Larrey, and followed by Gosselin, and, more lately, by J. Guérin and Maisonneuve, of "occlusion pneumatique" (*Gazette Médicale*, 1866, p. 7), the amount of resemblance to which, in Lister's method, constitutes, it seems to me, some part of its deficiencies. To a great extent this objection also exists to the plan followed during the second siege of Paris by Alphonse Guérin of using thick investments of compressed cotton-wool after washing the wound with alcohol, and then leaving it, without disturbance or removal of the deeper layers, for periods varying from a fortnight to a month, or even two or more. This plan for keeping from the wound injurious atmospheric influences seems to have been deduced from Prof. Tyndall's experiments upon the purifying results of the cotton filter of Pasteur. It was shown by Hervey (*Archives Générales de Médecine*, Dec., 1871) that, as used by Guérin, it neither prevented putrefaction and fetor in the wound, nor the formation of abundance of microsoa therein. In this, again, we have instances of the propriety of that regular and systematic inspection of wounds which the practice of hermetically sealing them up prevents us from obtaining.

With respect to the use of cotton-wool combined with due drainage, I look forward with interest to the paper promised for this section by Mr. Callender, who has, he informs me, obtained much success from its use combined with his own form of drainage tube. Cotton-wool has one great advantage as a dressing in cases of emergency. It is usually easily to be obtained in the necessary quantities after battles and railway accidents, when it is necessary to remove patients directly upon injuries or operations; it provides better than most other methods for the protection of the wound or stumps from injury. Tarred oakum possesses all these advantages to an equal degree, and has the superior quality of being also cooler and more antiseptic. My friend Mr. C. Heath, of University College Hospital, tells me that he prefers it to any other dressing, and, in the cases in which I have used it, it has answered admirably. In the free use of cotton-wool as a dressing during hot weather, I have found patients to complain of the heat of the wound or stump. At these seasons I believe oakum to possess a great advantage. In cold weather cotton-wool is comfortable enough, and affords an admirable elastic support and due compression to the wound; but, in my opinion, it has, if used without antiseptics, the great disadvantage which is shared by charpie and other absorbent applications, and which is increased tenfold when it is used, as in the French hospitals, for stuffing the interior of wounds and stumps to prevent union by adhesion and to absorb discharges. While kept in the wards in readiness for the dresser, these substances, as proved by the experiments of Chalvet, of Reveil, as well as those of Riselt, of Prague, and of Kallman, absorb the infective and putrefactive particles which float about in times of epidemic influences, or as exuvia in a crowded aggregation of wounded patients, and so may become direct vehicles of communication of local infection. The same may also be said of the water and lint used in the wards for the simple water dressing. Warmth and moisture without antiseptics are still more favourable to their diffusion. And the risks of both are increased by the carelessness or thoughtlessness which you cannot entirely eliminate from nurses and dressers in passing from one patient to another.

Professor Humphry has informed me that he is quite satisfied with his plan of leaving wounds and stumps entirely undisturbed and uncovered by dressing, having only the discharges wiped or washed away. Here atmospheric influences have full local play, aided by the accidental contaminations of water, sponges, or tow; and yet, in the spacious and well-ventilated wards and pure air of Addenbrooke's Hospital at Cambridge, the results are far from being unsatisfactory. In a time of bad hygienic influences, epidemic erysipelas, pyæmia, or of an accumulation of wounded patients in a London hospital, it is probable that this would not be the case. After frequent trials, I have come to consider that the free use of Chassaignac's drainage tubes issuing from the surface of the wound, or from its interior if deep and sinous, and with their outer extremities imbedded in cotton-wool or oakum, well permeated with M'Dougall's or Calvert's powder, as a disinfectant and absorbent of discharges, the surface of the wound washed over after bleeding has ceased with a mixture of solutions of chloride of zinc and carbolic acid or sulpho-carbolate of zinc, the same solution to saturate the lint dressing, applied in the same way as in water dressing, enveloped in thin gutta-percha tissue, and supported by strapping and a light bandage, affords the most readily applied, the lightest, coolest, and the most generally useful application of the antiseptic method; an outer envelope of cotton-wool or oakum, and dressing every day after the first opening of the primary dressing, complete the plan, from which I have obtained as good results as from any other that I have tried, and, what is perhaps important, I have found it less difficult to ensure its being properly carried out.

From this you will gather that I agree with Mr. Lund's view, as expressed in his able paper of "Observations" (printed in the *Manchester Medical and Surgical Reports*, 1870) as to the general efficacy of antiseptics, and in his position with respect to the germ theory explanations, although I do not consider the great elaboration of the carbolic or other dressings to be so necessary as he appears to do. I hope to learn somewhat more from his forthcoming paper on the same subject.

In clean incised wounds, where formation of pus is not likely to occur, as in some plastic operations, the hermetically sealing plan will no doubt maintain its position in general use in its most useful form of collodion. But when suppuration ensues, it must be got rid of. Its absorption by dry earth, as advocated by Dr. A. Hewson, of Pennsylvania ("Earth as a Topical Application in Surgery," Philadelphia, 1872), has the disadvantage of being dirty and offensive to the patients, and of obscuring by its colour the natural appearance of the wound when in contact with it; but as a substitute when better absorbents cannot be obtained, it seems to be of some value. Much the same may be said of charcoal. When this substance is combined with coal-tar, however, as in the way advocated by Dr. Beau, of Toulon, in the work already referred to, it would seem that a great part of the antiseptic vapour would be absorbed by the charcoal, and the two remedies to some extent thus neutralise each other.

Erysipelas does not seem to be much influenced by antiseptic measures. Such cases as are recorded by M. Chédevergue (*Bulletin Général de Thérapeutique*, 1864, p. 249) as an instance of the detergent power of alcohol as a topical application—viz., of erysipelas appearing upon the body of a patient, but not at all invading the wound itself—have several times occurred to me, and I dare say to most surgeons; and it proves no more than that erysipelas is a constitutional disease; and that, though usually, like scarlatina, when happening to wounded patients, showing itself first at the wounded part, it does not invariably do so.

> "The life of all the blood
> Is touched corruptibly."

And when pyæmic symptoms force upon us the momentous

* Des Pansements Rares, 1851.

question, "What should we do to save the patient? and can we do anything?" the answer which was made to me by a surgeon of experience in a case in which the patient got well, "You can do nothing, it is useless trying," would, I suspect, be given by many. In at least four cases of which I have notes, of undoubted pyæmic infection, as evidenced by exacerbations of temperature, secondary abscesses, lobular pneumonia, rigors, the treatment to which I subjected my patients, with little better hopes at first than those which drift into the law of neglect I have just illustrated, was attended with success. They were far from being slight cases; and I had not the advantage of being able to send them away to the benefits of purer air and out-of-hospital influences, as so powerfully inculcated by the teaching of Sir James Paget.

Besides persevering in the antiseptic local treatment and giving free access of fresh air, I surrounded my patient with a highly antiseptic atmosphere, by placing muslin bags of M'Dougall's powder around and within the bed and in abundance about the wound, so that he should both breathe the carbolic and sulphuric acid vapour and imbibe it as far as possible through the skin. If the stomach were not feeble or irritable, and able to take nourishment (the primary element of restoration), I also gave three- to six-grain doses of the sulpho-carbolate of iron, with a view of testing the practice so ably and exhaustively advocated by my friend Dr. Sansom, and described fully in his well-known work "On the Antiseptic System." I took care, as far as possible, not to give the drug soon after nourishment was taken, so as not to interfere with the first stage of digestion, and I discontinued it at once if the appetite fell off or if there was pain after taking it. Three of the cases showed, in from a week to ten days' time, that peculiar slate-coloured or olive-green colouration of the urine, the cause of which was attributed, in a description given by me of one of these cases (in 1868), after a chemical examination by the late Professor Miller, to a modification of the yellow indigo-like colouring matter of the urine by the action of the carbolic acid upon it. This curious and now well-known change has been noticed by Mr. Berkeley Hill, Drs. Fuller, Stevenson, and Wallace. These cases are completely recovered; but I am bound to say that in some other cases, not apparently more serious, but perhaps more insidious, the patients died out quite as comfortably as under any other plan, whether officious or let-alone in character.

I believe that cases of recovery frequently occur under other methods, or no methods, and that at least as much depends upon the age and reparative power of the patient, the amount of blood poison formed or absorbed, and the general conditions of the atmosphere, as upon any system of treatment whatever.

I attach much importance, as I have said, to free drainage in dressing wounds, and when made by the surgeon a good deal more may be done to favour this by a judicious choice of the direction of the incision in resections, &c., and the position of the flaps, &c., in amputations. The plan of making a puncture in the popliteal space, proposed and practised by Mr. Jonathan Hutchinson in excision of the knee-joint, is one which illustrates my meaning. The wound would, if possible, be made to slope towards that part which is most dependent when the patient is laid in bed. In amputations of the thigh, I think, for this reason, that the circular operation is most objectionable, on account of its forming a hollow funnel-shaped wound, which, in the necessarily raised position of the stump upon a pillow, holds the discharge like a bucket, only slightly tilted. Very good drainage is accomplished in the late Mr. Teale's excellent plan of a single square anterior flap. I have practised Mr. Teale's method with the best results, but for other reasons I prefer in the thigh an oblique double flap, with the outer end of the incision placed lower than the inner, and the front flap placed somewhat outside the limb, and longer than the hinder. After many trials, I am quite convinced that this both gives the most complete drainage, prevents the bone protruding, and makes a very shapely and serviceable stump, with the cicatrix placed well behind the point of pressure. Another important point bearing on this matter, in favouring the escape of discharges from the interior of a wound, lies in the manner of securing the arteries. When an artery is twisted in, as in the ancient Roman system, revived by Amussat and Velpeau, and lately tried by Mr. Cooper Forster (Trans. Clinical Society, 1870), and Mr. Bryant ("On the Torsion of Arteries," Med.-Chir. Trans., ii., p. 199), or when it is secured by a pin or wire, as advocated by the late Sir James Simpson, and practised at Aberdeen and elsewhere, or when it is secured by an antiseptic catgut ligature, cut off short on the vessel, as revived by Professor Lister, and tested and practised by Mr. T. Holmes, the theory is, that the wound should heal in the deeper parts as well as in the more superficial by the direct adhesive process. But this, in the amputation of an extremity, or a large resection, is not the rule, and, moreover, in large cities is not usual.

Now the parts that are most disposed so to heal are the smoothly-cut, self-adapting, and vascular cutaneous tegumentary structures, and these sometimes close up by adhesion, leaving interior cavities, especially about the bone and between the muscles, containing decomposing blood or pus, which afterwards accumulate, burrow, give trouble, and delay the cure, or cause by pyæmia the death of the patient. To prevent this subsequent inconvenience, after experience of it, seems to be the only rational explanation of the continental method still employed, of stuffing the whole wound with charpie, so as to ensure healing from the bottom, which seems so strange to our notions. If we could be quite sure that by torsion, metallic or antiseptic ligatures, we could secure complete adhesion throughout, the case would be made very much stronger in their favour. But this is certainly the exception, and not the rule. There are other elements at work influencing this, even more powerful than the local treatment. Now I believe, with my esteemed colleague, Sir W. Fergusson, that so long as we have this want of entire union, ligature threads may have the advantage of keeping open channels for the escape of discharges from the close neighbourhood of the tied arteries, the accompanying veins of which are frequently the sources of effusions of blood after the wound is dressed, which afterwards clot, and may putrefy. These ligature-threads I usually have well steeped in carbolised oil, and saturated so as to be unable to absorb discharges, but utilised to spread around an antiseptic influence sometimes in deep narrow wounds. I place them within or alongside of a drainage-tube. They can thus be made into channels for the introduction of antiseptic agents to the deeper parts, and this consideration may add to the much greater sense of security given to the patient, as well as to the surgeon's mind on leaving him, by the use of a safe knot, and a string to remove it by when it has performed its work. There is one point in the section of flaps which may I think have influence sometimes upon the introduction of pus or septic matter into the cut veins. When these are cut obliquely with the face of the flap, they are opened in a large conic section in the shape of a pen, and left, when placed on the underlying flap, in an attitude well adapted for receiving and conducting into their interior pus and putrid discharges which gravitate from the surrounding hollow and often funnel-shaped sides. To obviate this, I invariably, after a flap amputation, cut off the larger veins transversely.

The next subject I shall touch upon belongs to one to which I have directed attention for some years—namely, the radical cure of rupture. It is one which formed the subject of a paper I had promised for the present Surgical Section, but which my being called to this more arduous undertaking compelled me to withdraw, and to claim the privilege of making it a portion of the present address. I have long thought that we might, in favourable cases, safely do more than we now attempt, to prevent a return of the protrusion after the operation for the relief of strangulation. After performing operations for the radical cure more than two hundred times, I had grounds for the belief (which other operations on the peritoneum also favoured) that, in a healthy subject, the peritoneum might be dealt with as freely and as safely as any other tissue; and also, that the chances of bad results from peritonitis would depend upon the injury sustained by the bowel in strangulation, rather than upon any way of dealing with the peritoneal sac and parietes after the strangulation had been relieved, provided that due drainage be secured. In cases where the bowel and omentum are congested only, and most likely to recover when placed into their natural cavity, in young and healthy lads, with strangulated inguinal hernia, I concluded that the attempt would be justified, and would probably be successful. If so, the advantage of preventing a lifelong trouble and danger from rupture by the operation which

relieves strangulation is obvious. The kind of cases I selected for such an attempt, and the nature and results of the proceeding, will be best conveyed to your minds by a short *résumé* of the three cases where I have had the opportunity of carrying it into practice.

On June 29th, 1868, was admitted into King's College Hospital a young man, Alfred F——, aged twenty-one, of Warden-road, St. Pancras, with a strangulated right oblique scrotal hernia. The tumour had occurred suddenly from lifting. It was of the size of the fist, and had been strangulated twenty-four hours. He had constipation, violent retching and vomiting, not fæcal, quick pulse and anxious face, pain in the epigastrium, and much pain and tenderness in the tumour, upon which several ineffectual attempts at taxis had been made. I put him well under chloroform, and made a fair and full attempt at reduction by the taxis, but in vain. I then made an oblique incision over the tumour, dividing the layers in the usual way, and laying open the sac to the extent of three inches. The sac contained a moderate amount of omentum, covering a knuckle of bowel, all congested, and the bowel slightly ecchymosed, and there was about an ounce and a half of bloody serum in the sac. The point of strangulation was at the deep inguinal ring, and it was divided by an upward cut. The bowel was then drawn down slightly and carefully examined. It presented the usual indentation, but was smooth and shining. It was then returned, and after it the omentum, the latter being carefully spread over the deep opening. The sides of the sac were then brought together, so as closely to embrace the cord over the whole length of the canal. The handled curved hernia needle used in my operation for the radical cure, armed with silver wire, was then employed to bring together the sides of the sac, together with the aponeurotic structures along the whole length of the canal, in the way I have described in my work "On Rupture." A good view of the conjoined tendon was obtained, and the wire fixed in it in two places. The loop and ends of the doubled wire were then brought out at the upper and lower ends respectively of the incision. Four interrupted wire sutures were then placed though the skin between these points. The wound was dressed with carbolic lotion, and covered with guttapercha skin and cotton wool, powdered with McDougall's powder to absorb the discharges. The interrupted sutures were removed on the fourth day, primary union having been by that time obtained throughout, except where the thick wires passed through the extremities of the wound, and effectively kept up the drainage. These were kept in for ten days. There was not the slightest sign throughout the case of the peritoneum being inflamed, and the abdominal tenderness which was present at the time of the operation passed away entirely. The sickness ceased directly after the operation, and the bowels were opened naturally two days afterwards. Erysipelas being present at this time in the ward, the patient was attacked by it on the sixth day. A partial reopening of the wound was the consequence, together with suppuration in the fundus of the sac of the hernia. The pus passed freely along the wires, and there was no burrowing.

The suppuration in the sac caused obliteration and shrinking of that structure, and the testis was drawn by the subsequent contraction into the upper part of the scrotum. Some delay in the convalescence was thus produced, but finally the patient was discharged, wearing a light truss, August 15th, 1868.

During the first year after the operation I saw him twice or three times. There was no cough-impulse whatever when last seen, all the parts being very firmly braced up in the groin and around the cord. As he was repeatedly enjoined to present himself at once if any pain or weakness showed itself, and seemed fully impressed with the danger from strangulation which he had escaped, I have, I think, some right to conclude that there has been no return. The difficulty of following cases for a number of years in the nomadic habits of the population which furnishes the most numerously favourable cases for the radical cure is one which I experienced in this case.

The next case was in a patient who had wished much to be operated on for the radical cure before the rupture became strangulated, in consequence of the impossibility of keeping it up with a truss, and the consequent disability from following his employment. I had refused to do so because of his age and the direct nature and great size of the openings.

Martin W——, aged fifty-two, had suffered from a large, right, direct inguinal rupture for twenty-six years, which, though at first entirely reducible by rest and the recumbent posture, could not for many years past, on account of the large size of the opening, be entirely pushed back or kept up by any of the great number of trusses which he had tried. He was admitted April 14th, 1872, had been vomiting for eight hours, and was very weak and low. The tumour filled the scrotum, was of the size of the two fists, and was tense, tender, and painful, with the skin of the scrotum red and inflamed from handling. A somewhat prolonged trial of the taxis being made under chloroform, and after the application of ice for three hours and by inversion of the patient without success, the operation of herniotomy was proceeded with by a single oblique incision four inches long. On opening the sac, a very large mass of omentum was found adherent at the neck, but not elsewhere, and covered by it was a large fold of small intestine, dark and congested, but still smooth and glistening. After division of the strangulating band at the deep opening, the bowel, being found not much damaged at the strictured part, was easily reduced. The omentum was congested, but not gangrenous, and, on account of its size and the adhesions somewhat recent at the neck, could not be fairly reduced or retained in the abdomen. The mass of fat, about three-quarters of a pound in weight, was then cut off close to the adhesions at the neck of the sac. Such vessels as bled were tied separately, and the stump being enclosed between the sides of the serous sac, four interrupted sutures of carbolised hemp were applied through the sac and tendinous parietes, and tied up so as to embrace the cord pretty closely. The two uppermost sutures were passed through the stump of omentum itself. These and the ligatures upon the arteries were then tied up in one knot and left hanging out of the lower angle of the wound to act as a drain for the discharges from the face of the omental stump. Lateral pads of lint and a spica bandage were applied, and the patient placed with his knees drawn up and shoulders raised, and five grains of pilula saponis cum opio given every four hours. The vomiting and distress at once ceased; there was no tympanites and but little tenderness, and the bowels acted freely on the third day. An abscess subsequently formed in the lower part of the enormous sac, and a small slough appeared in the scrotum over the testis. Through the aperture left by this, the gland showed some tendency to protrude, but was easily kept in place by strapping and pads. By the use of a drainage-tube through the lower part of the primary incision, and out at the aperture left by the slough, the matter flowed away freely, and there was no tendency to burrow. The ligatures and sutures had all come away by the 29th of April, and on the 22nd of June he left the hospital with the parts much thickened, firmly braced up, and wearing a truss with a large ring pad. I have seen this patient several times since then—once in this present year. There was then a bulge felt in the groin when he coughed (and he has always a bad winter cough); but there was no sign of any descent into the scrotum, and a light truss kept him very comfortable and able to do a good day's work without inconvenience. He also promised to come to me at once if he had any more trouble with it.

The third case was that of Edward B——, a waiter, of Surrey-street, Strand, aged twenty-one, in whom the rupture, a right oblique scrotal one, had not been observed till the day before his admission, when, after lifting a heavy box, he felt pain and sickness, and felt a lump in his scrotum. A doctor to whom he applied gave him an aperient, after which he began to vomit, the pain was worse, and the tumour increased in size and filled the scrotum. This rapid appearance and increase of the rupture were afterwards explained by its proving to be a congenital hernia with the sac formed by the tunica vaginalis, of which these peculiarities are very characteristic. On the 28th March, twenty-four hours after the occurrence of the rupture, the symptoms were very intense, and the taxis, with inversion and chloroform, having been fairly tried after two hours' application of ice-bags, I performed herniotomy exactly as in the first case I have described. The omentum and bowel were found in the tunica vaginalis, both congested and slightly ecchymosed, with some effusion of

bloody serum. The knuckle of bowel was strangulated, not only by the deep ring, but also by a band of the omentum, necessitating the drawing down of both until the constricted part could be seen and released. It was a case in which the bowel might easily have been passed into the abdomen with the stricture undivided. After the operation the patient was at once relieved; the bowels were opened normally on the third day; no tympanites or tenderness became apparent. The central part of the incision healed by adhesion; a little discharge passed along the wires, which were withdrawn on the fourteenth day after the operation. He was sent out of the hospital April 26th, 1873, with a firm adherent cicatrix, and no bulge whatever. On the 12th May he showed himself, wearing a light horse-shoe pad truss; not the slightest sign of a return was evident. This patient is here to-day awaiting your inspection.

There are also other patients upon whom the operation for the radical cure has been performed. One of them—the largest rupture I have ever succeeded in curing—was operated on eleven years ago, the patient having followed afterwards a very laborious occupation as a porter in Covent-garden market. He wore a truss for only nine months after operation. I have brought him here to-day as a proof of the possibility of curing even a very large rupture by operation, and of curing it permanently so as to relieve the patient of the trouble and expense of wearing a truss even under the pressure of very hard daily work.

It has been said with respect to this operation, that evidence is wanting as to the permanency of the cure, and I am free to confess that it is exceedingly difficult to watch a couple of hundred cases for the space of ten or eleven years. The constitution of human nature is such that you cannot hope for the generality of patients to show themselves occasionally for this length of time, or even to write if they are not further troubled with the ailment of which they have been cured. It requires that powerful spring to gratitude which was said by the cynical French philosopher to consist in "a lively sense of favours to come," which is wanting in a case where there is no more for the doctor to do. I have found that the unsuccessful cases are more likely by the law of gratitude just enunciated to return upon your hands than the successful ones are, as a bad shilling expects to be replaced by a good one. I think, therefore, we have the better right to the position of reckoning in the same proportion of failures and cures cases which have not been seen twelve months after the operation, as those which have been examined after that time.

Now, of 188, most of them unselected, cases of inguinal hernia—of the 200 and upwards I have operated on to the present time, of which I have notes, including 7 females and 4 cases of double rupture, both operated on,—in 107 cases the results are more or less perfectly known. I find that 51 of these were more or less unsuccessful, of which 42 returned in the first year after operation—that is, the great majority of these were such as would do without wearing a truss after the first year. By far the greater number were so much improved that they were made comfortable by a truss, which was not the case in most instances before the operation. Some, but not many in number, were as bad as before the operation. Mr. Kingdon, of the London Truss Society, kindly forwarded to me in 1863 the names of three of those who had applied to that institution since the operation for the supply of a truss. 56 out of the 107 were cases which continued to be successful subsequently a year after the operation, as ascertained either by direct examination by myself, seen by other surgeons, or satisfactory to the patient himself, and either wearing no truss at all, or only occasionally, as a precaution, after the first year from the operation. Of these, 7 were noted from thirteen to twenty-one months after the operation, 7 from two years, 7 from three years, 7 from four to six years, 7 from six to eight years, and 4 from nine to eleven years. Reckoning operations on both sides and repetitions of the operations, I have done the operation more than two hundred times. Out of these I have had three deaths—one from pyæmia, one from erysipelas, and one from peritonitis. These have been made public to the profession on more than one occasion, because I judged it right and fair that in an operation of this kind the facts should be made known as far as possible. In the last case, as shown by the post-mortem examination, the peritonitis was found not to have originated in the parts operated on, but in a knuckle of bowel which had been lodged in the hernia before the operation, while the patient was wearing a strong truss. The cases in which any signs of peritonitis were observed were not more than about twenty in the whole number. One and a half per cent. is not a high average of deaths from purely accidental surgical incidents, and there are very few operations of the kind—as, for example, for the removal of deformity, the cure of prolapsus of viscera, or of hæmorrhoids—which could show more favourably either in this respect or in respect to the somewhat severe test of the length of time in which they have been known to be without a relapse after the operation; and since 42 out of the 51 known unsuccessful cases proved to be so within the first year after operation, and most of the cases were examined once or more at various intervals of time after the operation, I think that in respect to this point we have a right to claim the probability of more, and the certainty of at least as many, good results for the 81 of which I have not been able to get notes after the first twelve months, as for the 107 in which I have done so. Under the age of twenty-one years the results in known cases are much more satisfactory, and amount to 75 per cent. of successful cases. But of dry statistics you will think that I have given you, perhaps, more than enough.

The determination of the question as to whether the operation for the radical cure is an appropriate alternative to a life-long wearing of a truss, and a valuable supplement to the slow and very uncertain cure by truss pressure, will continue to depend upon the age, habits, circumstances, mode of life, and, to some extent, the cruel experience of trusses, and wish of the patient after having the matter fairly put before him, and, perhaps, nearly as much upon the anatomical knowledge, skill, energy, and experience of the surgeon, or his disposition to the finality frame of mind I have alluded to. In any case, whether universally or only occasionally resorted to, it forms, I think, a valuable addition to the resources of surgery.

Cases of ectopia vesicæ and epispadias possess an interest for surgeons who have a tendency to plastic efforts which results, partly from the well-known futility of all operations to relieve them until recent years, and partly from the frequent appeals for relief from the miserable condition to which the unfortunate patient labouring under this deformity is reduced. During the last ten years that my attention has been directed to this deformity, I have met with between forty and fifty cases, and many more have been recorded by my fellow-labourer in this direction, Professor T. Holmes, who first practised in this country in March, 1863,* the plan followed successfully by Pancoast and Ayres in America in 1858. It had been suggested, apparently, by M. Richard's unsuccessful application, in 1853, of Nélaton's principle of laying a flap upon the parts to be covered, with the skin surface downwards, and covering it with another. Others have been operated on by Messrs. Simon, Lloyd, Sydney Jones, and Thomas Smith, with, I believe, but little success. I have operated, up to the present time, for the relief of sixteen cases. All except three were males. Of the three females, one, aged nine, died from uræmic poisoning, the kidneys being found extensively affected with cystic degeneration, one being entirely converted into a membranous sac. The other two unsuccessful cases were operated on at too young an age for the extent of the deformity which was present, the constant efforts of crying after the operation acting upon the very protruding bladder and causing entire separation of the flaps after they had partially united.

My first case was operated on by lateral flaps only, not reversed, in October 1863; and was, after two supplemental operations, entirely successful. The boy died afterwards from erysipelas of the head and face; and I had an opportunity of preserving the parts operated on, which may be seen in the adjoining museum of preparations collected for the purposes of the present Association. It is interesting, as showing the formation of a smooth serous membrane on the deep surface of the superimposed flaps.

All my other cases were more or less successful. Two were shown in the course of last year at the Pathological and the Medical and Chirurgical Societies, in one of which especially the artificial covering was so complete and perfect that for a short time the boy could be made to hold his water by the application of an india-rubber ring around the

* See THE LANCET for June 27, 1863, and his work on "Surgical Treatment of Diseases of Children."

penis and artificial preputial covering of the urethra. All the thirteen successful cases could be kept dry and comfortable by the application of a guard and india-rubber tube and bag, as in a railway urinal. Eight cases (seven male and one female) were published in the Medico-Chirurgical Transactions of 1868, vol. liii. Eight others (six male and two female) have been operated on since that date.

Time will not allow me to give further details of the various methods I have employed to obtain these results. Some of these have been previously employed by Nélaton and his pupils, MM. Richard and Follin, and followed by Pancoast, Ayres, and Holmes. A full description of my methods has been published in the Medico-Chirurgical Transactions just alluded to.

I am able, I am glad to say, to give the members of the Association an opportunity of seeing here, or in the neighbouring wards of King's College Hospital, four cases, one of which has not been operated on, two in which the first stage of operation has been reached, and one in which the operations are completed. From these they can judge for themselves of the value and utility of the work done.

For the analogous but less disabling condition of epispadias, I have operated twice by Nélaton's method with favourable results. For that of hypospadias, in which the urethra was deficient below as far as the scrotum, I have operated three times, upon a plan somewhat similar—viz., a reversed flap from the side of the opening, with another from the scrotum superimposed upon it. In one case—a boy of one year and a half—which had been interfered with considerably by a former unsuccessful operation, the result was an entire failure. In another, a boy of six years, the result was so far successful after one operation that another slight one will complete it. In a third case, that of an adult male aged twenty-four, the result after two operations was an entire success, enabling him to pass his water comfortably over his trousers, and giving to some extent the power of sexual connexion.

A similar plan, combined with internal section and dilatation of the strictured urethra, I have found to succeed admirably and completely in two cases of penile urinary fistula communicating with the urethra in front of and close to the scrotum, accompanied with a hard cartilaginous stricture of scrotum. One was a bad traumatic case, which had been before operated on unsuccessfully by another surgeon. Cases of this kind have been long considered to resist all the efforts of plastic surgery; and, before adopting this plan, I have myself been, and have seen others, baffled in attempts to close the fistula.

In connexion with the subject of the treatment of stricture of the urethra, I may mention that among the novelties of the past year is the plan of M. Demarquay, of passing a long flexible hollow bougie through a perineal urinary fistula previously enlarged by the bistoury, and then one end forwards through the stricture and out at the meatus, and the other end backwards into the bladder.

The ingenious plan of Mr. Furneaux Jordan of Birmingham, of treating obstinate impassable strictures by attacking them in the rear through an opening from the rectum into the dilated urethra behind the stricture, is also a valuable contribution of the year to surgical resources in troublesome cases (see *British Medical Journal*, Nov. 9th, 1872, No. 619). Mr. Jordan informs me that he has operated in three cases of the kind with complete success.

In other kinds of plastic surgery, much has been done of late years. Since my own successful case of transplantation of skin from the abdomen to the arm for the relief of a frightful deformity of the wrist (published in the Medico-Chirurgical Transactions for 1863, vol. xlvi.), I have had two more successful cases. A similar operation has been also successfully performed by Mr. Thomas Smith in the wards of St. Bartholomew's Hospital; and my colleague, Mr. Henry Smith, has quite lately had a very good case of operation upon the same plan, for the relief of an extreme contraction of the elbow after a burn in the left arm of an adult female. In rhinoplasty, in which so much good work has been done by Mr. Hamilton of Dublin, I have had some good cases of restoration of the nose from the cheeks and upper lip. Some of these are found among the photographs laid before the meeting. The last case I have undertaken is about the most difficult one I have ever had to deal with, in the width of the chasm and the extensive loss of substance. The nasal vomer, ascending portion and a considerable part of the alveolus of the superior maxillary, the whole of the ethmoid except the cribriform plate, have necrosed away, as the result of scrofulous lupus. The great prominence of the frontal sinus also constitutes an element of difficulty. To afford a basis for the new nose turned down from the forehead, I have resorted to the plan frequently followed successfully by Sir William Fergusson—"vir eminens et magnus inventor"—of dissecting off and bringing towards the median line the skin of the whole of both cheeks. To secure the union of these, and to afford a prominence to the point of the nose, I followed a plan that I have employed in three bad cases with very satisfactory results, two of which are shown in the photographs which lie upon the table. At the same operation I turned up the middle third of the upper lip, and split it up from its lower edge, turning over the borders, so as to afford a bridge of support and an extended raw surface for union with the apposed cheeks. This was rendered necessary to enable the cheeks to meet in the median line, as well as to ensure their union to each other. When this was entirely healed, by a second operation I dissected up the mucous membrane from the bridge made of lip-tissue, and reflected it over the gap still left between the eyes, so as to form another bridge of support for the root of the new nose, preventing it from sinking into the gap so as to become too much depressed. I then turned down the new nose from the forehead after the Indian method, fitting it on to the new surface, which gave it admirable support, and elevated the point of the new nose in a manner which one does not commonly see after this operation. This patient I have in attendance for the inspection of the members, and is still under treatment in the wards of King's College Hospital.

The very original and ingenious method of M. Reverdin I have practised with advantage in many of these rhinoplastic cases, to eke out any deficiencies of skin in corners where it was desirable to prevent puckering, if possible, from contraction, or to substitute skin-tissue for mucous membrane exposed by reversal of the upper-lip structure, which for some time is rather apt to show its parentage too plainly, unless subjected to more friction than is agreeable or possible upon a newly formed nose. In applying this method to large sores of the leg, or those resulting from burns, where the contraction of cicatrisation is impossible or injurious, a certain amount of success has been obtained. Perhaps the healing is somewhat expedited; but it is certainly more accomplished by the cicatrisation and contraction of the original edges of the ulcer than by the increase of the transplanted patches. We have also found a tendency in the resulting cicatrix to ulcerate again readily. I do not think that this method will supersede the necessity for larger transplantations of skin in those severe cases which call most urgently for surgical interference.

Among the recent innovations in operative surgery, I have barely time to notice one which l'audace of the French school is applying in a manner which those who have reached the finality stage of development may well call daring, if not rash. I refer to the use of the *aspirateur* of M. Dieulafoy to relieve distension by puncture of the bladder in cases of retention of urine, and of the intestine in abdominal obstruction, and in joints affected with hydrops articuli, and even to evacuate the fluid contents in strangulated hernia. In the first-named of these conditions it is no doubt valuable as an adjunct to other remedies. In intestinal obstruction Demarquay has not found it of much practical use, because of the rapid re-formation of flatus, which quite corresponds with my own experience of puncture in desperate cases without the aspirator. In the puncture of joints and in the cure of hydatids I have used it, but not frequently enough to pronounce upon its capabilities. I have not yet arrived at the measure of audacity to use it in strangulated hernia. It scarcely agrees with my own impression as to the importance of avoiding any additional injury to the bowel in dealing with strangulated or other hernia. The propriety and the limits of the use of this instrument are only entering upon the *sub judice* stage, and we must wait for more of those bad consequences following its employment which have already occurred before we can pronounce fairly upon its legitimate use.

In the use of *anæsthetics*, we find now rising a revival of the rivalry between chloroform and ether, which the fame and support of the late Sir James Y. Simpson had decided in this country in favour of the former. We follow but

tardily, in this old country, in that combination of pleasure with utility which has led lately the inventive genius of our transatlantic brethren, "over charming, ever new," to the association of æsthetics with anæsthetics in the performance of operations under these agents to an obligato accompaniment upon the organ, and an appropriate address by a popular preacher, improving the occasion on behalf of morals. The comparative safety of these agents is unquestionably a most important point, and one that must ultimately decide the matter in favour of that anæsthetic the use of which involves the fewest casualties. The chief difficulty in determining this important point is the natural disinclination to make public such cases. It is less objectionable, however, to do so when a certain lapse of time has occurred after the accident; and it is to be hoped that, in the not very far future, we may arrive generally at that philosophic frame of mind which will consider it as much a duty to publish unsuccessful cases as it is a gratification to achieve the glory of a brilliant result.

In the domain of surgery, gentlemen, are so many regions now undergoing exploration and re-examination, that I may fairly claim an excuse for having led you chiefly over ground which I have myself travelled, and for omitting many equally important territories perhaps more effectively mapped out, and to some of you more interesting. In exploring this domain, many pioneers are required, and many very qualified ones are busily at work. Those who have skill and pluck enough to find a new road of investigation, even if it be only to prove that it leads no whither, deserve commendation for this proof, which is itself good work done. They demand our sympathy, perhaps, more than those who are lucky enough to lead up to the most auriferous diggings. The age we live in is too much given to the worship of success to afford much of this sympathy; and it accords, usually, too little merit to such as have contributed to prepare a way for the honour which another has reached, profiting, it may be, by their mistaken vestiges in travelling upon the same errand. As we advance our horizon itself extends; the very multitude of objects brought into view perplexes the perception of them, and even our instruments for detecting and examining them become so numerous as to be themselves *impedimenta* to our progress. The difficulty of deciding upon any given point becomes greater as differences become more minute, and proof more complex and further from our standpoint. The use of the imagination in science has already been powerfully justified, and the time may yet come when a complete and logical proof will be as little possible in scientific knowledge as in dogmatic theology. The theory of probabilities will doubtless be more employed to compensate for the imperfection of the record, and may be turned to advantage in archæbiosis and the germ theory as much as in the Darwinian. It will thus become easier for the critic to fall into the error of asking for more evidence than the nature of the subject admits of—a sure sign of the limited area of his habitual observations. But even this tendency is productive of good. It is merely the redundant energy of a single-minded instinct in this natural enemy of inventors and innovators—sent, doubtless, as hawks to keep down sparrows, to ensure proper limits and decent order among the more imitative minds who follow, prove, and sometimes improve, upon originators, and form schools and fashions. They thus accumulate a chastened experience. When wrighted by the synthetical faculty, this instinct constructs eclectic systems, more than ever needed in the present chaos of crude ideas and undigested opinions, to which these swift-winged writers are fearsome scourgers. By their keen research they discover when and how things are reinvented and rediscovered, show the limits of their application, give warnings of danger and excess, which, if often falsified, at least inspire a useful caution, or lead to a more ensured confirmation. Still more useful are they in deciding when discoverers disagree about priority. Whether right or wrong, they ultimately have the effect of consolidating and rendering more certain a well-grounded reputation. Misled by the Chasles forgeries, they found out that Newton had been preceded in his discovery of gravitation by a French *savant*, and thus elicited an elaborate and conclusive proof of its great originality. They have lately asserted that Harvey had been forestalled in his discovery of the circulation of the blood by Walter Warner, and have thus given us the benefit of the profoundly learned vindication of the Linacre professor of anatomy and physiology at Oxford.

A still greater influence and responsibility than heretofore will rest upon these labourers in science. The fruition of really great discoveries has been, and will, no doubt, continue to be, postponed by the blind opposition of those who form the scientific opinions of the age, and, though they usually check one another, so as to act, on the whole, with advantage, yet their neglect or prejudices may undoubtedly prevail so as to inflict injustice upon individuals, and do injury to science and to mankind, the more lasting in proportion to their position, ability, and conscientiousness.

A CONTRIBUTION TO THE

SURGERY OF NATURAL AMPUTATION AND SPONTANEOUS FRACTURE.

BY WM. CURRAN, L.R.C.P. Ed., M.R.C.S.L., &c.,
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THOUGH the heading adopted above appears somewhat *outré* and paradoxical, if it does not actually imply a contradiction, yet it is not the less appropriate, as I hope to be able to show further on; and meantime it seems to be the best course to accept it as it stands, and leave the facts disclosed within to explain it as best they may. I certainly can devise no better at present, and the circumstances under which I write preclude the possibility of its modification or amendment through the medium of books or by reference to learned surgical authorities. I must therefore bespeak the indulgence of my readers, and ask them to put themselves for the occasion in my place, and interpret the facts which I will submit as leniently as they can.

By the phrase "natural amputation" I understand a process whereby the constitution divests or rids itself, *proprio motu*, of an injured or offending member, and thereby dispenses with or supersedes the interference of art. The prefix "spontaneous," on the other hand, is frequently used in a sense which would appear to imply a very opposite meaning; but this is due to the imperfection of our language rather than to any ambiguity on the part of the word itself, and technical terms are often used to bear a significance, or made to wear a garb, which their ordinary conventional acceptation would scarcely warrant or suggest.* Thus we hear of spontaneous evolution of the fœtus in utero, spontaneous rupture or cure of an aneurism, spontaneous escape of the contents of a cyst or abscess, &c.; and it seems to be now generally understood that accidents which are due to a much smaller degree of injury or violence than would affect a part in health should be classed as spontaneous. It is in this sense that I use the term; and the cases recorded below will, I think, be more appropriately described under that designation than under any other that I can devise or am at present acquainted with.

Though the phrase "spontaneous fracture" is frequently used in books, the designation "natural," or, as I think it might be called, "spontaneous amputation," is rarely, if ever, found in them; and I am not aware of its having been discussed, in the sense contemplated by me, by any previous writer. It certainly calls for a greater amount of critical forbearance and apologetic explanation and comment than its less formidable counterpart; but I can freely say that it is no overweening love of novelty, or craving after paradox, that induces me to use it, but, on the contrary, sheer unrelenting necessity and a desire to define what I mean as clearly as I can. Indeed, I can find no better substitute; and no cases akin to or exactly parallel with those described below have ever occurred to me before. The subject does not appear to be even alluded to in the ordinary text or other books to which I have had access, simply because there are always appliances at hand in civilised countries whereby the efforts of oppressed nature are aided or controlled, and there is no occasion to wait for the slower struggles of an enfeebled constitution or the undermining effects of local decay. In remote mountain regions, however, and among a sparsely situated or half-savage people, this is not the

* Difficile est proprie communia dicere. (Hor. Ars Poet., l. 128.)

case; and where serious accidents, as compound fractures &c., happen, they must often be left perforce to nature, or dealt with in such fashion as the means at command, or the skill of the village doctor, will suggest or allow.* In other words, the subjects of them must die unrelieved, or recover as best they may. Of these the cases recorded below are, I think, examples in point, and it will be seen, I hope, as we advance that these may be regarded as instances of natural amputation. As such they are reproduced here, and after summarising them I will subjoin such criticism or comment as their characteristics may call for, or as their surroundings may suggest.

CASE 1.—A Hindoo girl, aged about nine, was brought to the dispensary hospital at Cawnpore some time during the hot weather of 1865, in a state of great prostration and anæmia, the result primarily of hæmorrhage and subsequently of suppuration and want of proper food and treatment. The left leg was absent, and the black and offensive stump of the femur protruded considerably beyond the flesh, which latter was itself indurated and brawny, of a dark, sooty colour, and but loosely attached to the upper part of the bone. Her parents alleged that her leg had been torn away by a crocodile,† from whose grasp she was with difficulty rescued at the time, while bathing in the Ganges some months previously, and that no other treatment had been resorted to than that suggested by the local hakim (doctor). Whether the leg had been actually torn away in the manner here described, or had sloughed away at a later period, I cannot now say, but when seen by me, in consultation with my friend Dr. J. Jones, then civil surgeon of Cawnpore, the parts were in the condition referred to, and the child was emaciated and enfeebled in consequence. There could be no doubt as to the propriety of their removal, and it was to decide on the best method of doing so that my aid and advice were requested. Considering that it would be necessary to remove the damaged limb at the hip-joint—for there seemed to be but little doubt as to the unsoundness of the bone throughout—and taking into account the debilitated and anæmic condition of the child, that any serious loss of blood might turn the scale against her, and that there was no immediate occasion for interference, I recommended delay, in view to diminishing discharge and improving her general health. Meantime, we both agreed that the dead and stinking stump, or such portion of it as protruded most, should be removed forthwith, and it was while carrying out this part of the programme that the change occurred which lends so much interest to this case, and renders it almost unique of its kind. No sooner had my friend laid hold of the portion of blackened femur that protruded, for the purpose of sawing off its most offensive part than the whole bone came away from the socket, and thus constituted what I, perhaps erroneously, venture to call natural amputation, or enucleation at the hip-joint. The ragged and projecting flaps of skin were pared down, as good a stump was formed as the condition of the parts would allow, and the child was soon afterwards taken away, in a greatly improved condition, by her parents.

CASE 2.—While travelling into Cashmere in May, 1867, I met a somewhat similar instance of (natural) amputation at the shoulder-joint, in the person of a boy of a scrofulous diathesis and delicate organisation, about whose appearance and history I made the following note, which I extract almost word for word from my diary of that date:—"I saw this day, at a place called Chikar, in the Himalayas, a lad of say thirteen years, whose left arm had dropped off at the socket, in consequence of a fall from a horse on the shoulder, which opened into the joint, and which he sustained at an early period of life. This would appear to have produced a compound fracture which, through neglect or mismanagement, resulted in or led to mortification of the surrounding tissues, and these ultimately giving way carried with them the limb, as already mentioned. There was a fair, but, as might be expected under the circumstances, a puckered cicatrix, and a somewhat misshapen stump; but he could freely move the scapula and what remained of the deltoid, and there was, on the whole, very little deformity. He assured me the part was quite free from pain, and I felt and squeezed it without causing him to object or flinch. I looked in vain for any depression corresponding with that of the old joint; the parts in the neighbourhood were fairly nourished, and, though not strong, he yet enjoyed good health. He offered, in consideration of the interest I appeared to take in him, and doubtless also with a view to ulterior consequences, to accompany and show me the way to the happy valley; but I did not require his aid, and dismissed him with a trifling present, in a blissful state of indifference as to the future." I met him again on my return, and also at a later period; but found no reason to change my view of his case, or modify the description of it given above, and I turned towards home with the sad reflection that he might not have fared so well under the hands of a Fergusson, and with an enhanced estimate of, and admiration for, the preservative powers of our common mother Nature.

CASE 3.—While returning by the same route on recall some days subsequently, I met a man at a place called Dunna, one of whose legs was removed by a somewhat similar, if indeed it was not identical, process to that just referred to. The account he gave of the injury was briefly to the following effect:—He stated that while sawing timber with a large double-handed saw (such as is commonly used in India) in a pit at Murree, the saw slipped, and, together with the log on which a companion was standing at the time, fell on and broke his leg at the part or place already mentioned. The fracture was a compound one, and, instead of resorting for advice to any of the local civil or military medical men, he, with that longing after home which is so frequently seen in mountaineers, returned on foot, or with such aid as he could casually command on the way, to his village some twenty or thirty miles distant. The parts, as may be easily understood, were not improved by this procedure; on the contrary, they swelled to an enormous extent, and soon afterwards mortified, and the upshot of this was that the muscles sloughed away, carrying the leg with them, as already described. When seen by me the tibia was tightly covered with skin, which was very sensitive to the touch. He could not walk or stand on the stump, and the least amount of pressure or pinching caused uneasiness and pain.* I offered to relieve the tension of the part by operative interference, but he declined my aid with the characteristic apathy of his race, and preferred, with philosophic composure, to bear the ills he had to incurring the risk of aggravating, or the chance of improving, them by a resort to the knife. Indeed, the injury and its consequences were his principal, if they were not his only, source of income, and I have no doubt that he turns both to good account. He was a healthy man in the very prime of life, who appeared to make light of his mishap, and he spoke without any appearance of bitterness and regret of his mutilation and sufferings.

(To be continued.)

* For some striking illustrations of the rude surgery here contemplated, the curious reader is referred to "Southey's Doctor" (Longman's edition, p. 303); to "Tales of a Grandfather," by Sir Walter Scott, chap. xiv., p. 82; to "The History of Friedrich II. of Prussia," by Thomas Carlyle, vol. i., pp. 109, 110; and to the article on Amputations in "Cooper's Dictionary," edited by Lane, vol. i., p. 56, &c.

† For some account of the manner of *dosing* a crocodile, practised by the Indians of South America, &c., see "The Life and Travels of Alexander von Humboldt," p. 121. New York: Rudd and Carleton.

* While staying during the heat of the day at a place called Mozufferabad, on my way to Cashmere, in July, 1868, I met a man there who had been summarily deprived of his hands by robbers near Kobat, for the sake of the trifling silver ornaments he were. The stumps were, of course, projecting, and painful from being still tightly bound down by skin; but nevertheless he appeared to bear his affliction with equanimity, and he steadily declined to avail himself of any aid that surgery might offer. Similar cases are to be found in various parts of the country; they are, or were, particularly common on the frontier, and the deprivation of an offending arm, the gouging of a too curious eye, and the summary removal of rebellious testicles, were expedients in favour with Asiatic rulers of the old school, who knew nothing of Dr. Guillotine or Mr. Calcraft, and never heard of murder being classified among the fine arts. I have seen several persons who were similarly dealt with by the mutineers of 1857, and I have no doubt that cases of the kind might be counted by the dozen in the bazaars of Cabul, Bokhara, and Kokand.

THE SIZE OF SIRIUS.—By the application of spectrum analysis to the theory enunciated in THE LANCET, 1848, vol. i., p. 447, relative to the light of the sun, Mr. J. J. Lake estimates that the mass of Sirius is not less than twice that of the sun. He was led to this by a comparison of the different widths of the F hydrogen line of the spectrum under the ordinary atmospheric pressure, and that of the solar and Sirian atmospheres.

ON THE ACTION OF CHLORAL HYDRATE.

BY WM. KIRKPATRICK MURPHY, M.D.

(*Concluded from p. 151.*)

CASE 3.—A young man, aged twenty-nine, lightly but strongly built, addicted to out-door sports, hunting, steeplechasing, &c., and remarkable alike for physical and moral courage, had been suffering from persistent sleeplessness, the result of mental worry. By the advice of a friend (Case 2) he was induced to try chloral. He did so, and continued its use almost daily for eighteen months. He kept no account of the quantity he took, but poured so much by guess from the bottle into a tumbler as experience had taught him was requisite, and repeated the dose once, or even twice, if the first were unsuccessful. The effect of this constant drugging with chloral was no doubt greatly neutralised in his case by the open-air life he led, and by the amount and violence of the bodily exercise in which he daily indulged. Once, at least, he completely narcotised himself, and had to be kept awake by artificial means. He was daily losing strength, nerve, and capacity for business, when his last experience summarily put a stop to further excesses. He awoke one morning to find the power of his lower limbs completely gone. Fortunately the paralysis was transient, but, I need scarcely add, he has slept without chloral since.

The following points deserve notice:—

1. The patient found it necessary to increase the dose as he went on. Sometimes a large dose proved wholly ineffective, and had to be repeated once or even twice in one night before sleep, fitful and restless, ensued. On these occasions, on awaking he suffered from intense thirst, with dryness of tongue and fauces, headache, vertigo, nausea, and great nervous sensibility.

2. In this case also there was well-marked erythematous flush, similarly intensified on the ingestion of beer, spirits, &c., and accompanied by a degree of palpitation obliging the patient, though a strong man, to lie down anywhere for a couple of hours at a time, completely prostrated.

3. Eyes affected precisely as in Case 2.

4. Acute, wandering pains in lower limbs, especially in the calves of the legs, occurring during many weeks previous to cessation of chloral. Had a feeling at times, on putting his feet to the ground in the morning, "as if," to use his own words, "his legs were all in a mash"—as if he "could not distinguish clearly between one part and another"—indicating both diminished and perverted sensibility of no ordinary character.

5. Finally, on rising one morning, he found his legs suddenly give way under him, was unable to stand or walk, and was obliged to get into bed again. This attack fortunately passed off in the course of the day, but left behind it great nervous depression and bodily weakness, accompanied with a feeling of utter vacuity of mind and inability to concentrate the attention upon anything.

Remarks.—Chloral, then, acts primarily upon the brain and nervous system; indirectly, though almost simultaneously, upon the heart and vascular system. Its effect in moderate and isolated doses appears to be quickly and strongly sedative; in large and repeated doses it seems to exert a positively paralysing effect. Witness, as seen above, the disturbance or failure in the regulative influence of the capillaries of the head and neck; of the capillaries, iris, and lachrymal gland of the eye; of the muscles of deglutition; of the heart (muscular substance); and, finally, of the muscles of the lower limbs *en masse*. Its influence in this respect, clearly, is not confined to the sympathetic, as suggested by some, but extends also to the cerebro-spinal system of nerves; though, not unnaturally, the former first succumbs to its cumulative energy, as illustrated in the order of symptomatic events detailed above. Nor is there any reason for supposing that, were its administration carried to even greater excess than, fortunately, has hitherto been ventured upon, general paralysis of the whole frame might not ensue; while the cases of sudden death recorded indicate the possibility of fatal collapse at any moment from instantaneous failure of the heart's action. That its natural tendency, when taken for some time, is to depress the nervous system and lower the heart's action all are agreed. And the recorded experience of some has already demonstrated the fact that where the heart's action is weak, or where any tendency to paralysis has previously manifested itself, the use of chloral as a hypnotic is totally inapplicable, the symptoms in either case being directly aggravated thereby, and the constitution gradually sinking beneath its enervating influence. But the question arises, Are the consequences alluded to—aggravation of individual symptoms, and general constitutional decline—to be limited to these two classes of cases only? In my experience, certainly not. Thus, in Cases 1 and 2 cited above, the one suffering from vesical neuralgia, the other from dyspepsia with great nervous depression, not only were the specific symptoms notably aggravated, and the general system dangerously reduced—a price at which, as the event proved, sleep was dearly purchased—but both patients had actually to be treated for *chloralism* before remedies directed to their original maladies could be exhibited with any propriety or prospect of success. Moreover, and as a natural consequence of its constitutional effects, the period of convalescence from this new complaint is something to test the patience of the most Job-like disposition, alike from its duration and the number and eccentricity of the phenomena exhibited during its career. This is especially noteworthy, as not the least among the evils attendant upon the prolonged use of chloral. Thus the lady referred to in Case 1 was fully twelve months under treatment before she could be said to have recovered all her faculties, bodily and mental—in some respects she will never be the same woman,—though her original complaint had long before disappeared. Again, the lady in Case 2 has been eight months under treatment, and I do not consider her recovery from the chloralisation alone as yet complete. But, though still suffering in some slight degree from nervous dyspepsia, she secures on an average six or seven hours' sleep nightly without any hypnotic whatever. In Case 3 convalescence was established with exceptional rapidity, the patient's naturally fine constitution readily responding to the healthy stimuli of an open-air life and severe and constant bodily exercise.

Whilst disposed, therefore, to grant the incalculable benefits to be derived from hydrate of chloral *as an occasional or temporary hypnotic or sedative* in acute disease, and where not contra-indicated, I think sufficient evidence has been adduced, not merely to render the policy of its employment in chronic affections very questionable, but to suggest the total impropriety of its administration in chronic disease at all. To be sure, it may be objected that chloral is comparatively a new medicine, and cannot yet have been thoroughly tested. And with equal fairness it may be asserted that its value as a therapeutic agent is not to be appraised by the *ipse dixit* of a solitary practitioner. Both propositions are indisputably just. To both, however, I would with deference submit in reply the data recorded in the above cases. They constitute a series of reliable clinical facts, personally observed and attested, and embrace within themselves, it seems to me, all the elements necessary to the deduction of a fair and legitimate inference. They may be said to be typical cases, in fact, presenting such characteristic variations in detail as to render their approximate uniformity in result altogether remarkable. Thus the original malady in each case was different, as also were the constitutions of each and their susceptibility to hypnotic influences. Similarly, too, the quantity of chloral exhibited, the times and modes of its administration, and the duration of its continued use—six, eighteen, and twenty-four months respectively,—and last, but not least, the authority and supervision, whether those of a professional attendant or simply, as in Case 3, the patient's own, under which it began and continued, all present diversities sufficiently marked and peculiar. Compare, then, these diversities in malady, constitution, and treatment with the curious similarity manifested in the individual symptoms of each and with the absolute identity presented by all in general tone and tendency, and what follows? The conviction, I think, must be forced upon every candid mind, that the protracted use of chloral, especially in its application to chronic disease, is equally impolitic and unjustifiable, inasmuch as it has been shown, I would hope conclusively, that when long administered it is not less insidious in its nature than it is unquestionably pernicious in its effects.

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THE PHYSIOLOGICAL CHANGES IN THE POSITION OF THE HEALTHY UNIMPREGNATED UTERUS.

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THE true pelvis contains the bladder, the rectum, and the uterus with its appendages. It often contains, in addition to these, a coil of the large or of the small intestine. Of these—the pelvic contents—the only organ whose volume remains always the same, or nearly so, is the unimpregnated uterus. The bladder and the rectum vary in volume to a considerable degree; the variation depending on the amount of urine contained in the former or of fæces in the latter. The uterus, not being fixed, but only loosely maintained in the cavity of the pelvis, must necessarily move in obedience to the changes which take place in the volumes of the neighbouring organs, the rectum and bladder.

To appreciate the changes in the position of the uterus arising from alterations in the volumes of the rectum and bladder, it is necessary to glance at the mode of its attachment to those organs, as well as at the manner in which those organs become distended. The series of positions which the uterus is made to assume by the alterations which the neighbouring organs undergo during the healthy performance of their functions is the series of positions which the uterus can normally assume; and if the extreme positions be fixed, all the intermediate ones become known.

The bladder in an empty condition presents, on antero-posterior section in the median line, a triangular outline. The apex of the triangle is situated near the upper border of the symphysis pubis; the anterior wall is closely attached to the posterior surface of the pubic bones; the base extends from the pubic arch to the anterior surface of the cervix uteri, and is closely and firmly united to the anterior wall of the vagina; the posterior wall is free, and extends from the point of reflection of the peritoneum from the anterior surface of the uterus to the apex at the symphysis pubis. It looks upwards and backwards into the cavity of the abdomen. While the bladder is being distended, the increase in volume takes place by increase in the length of all its walls. The base of the bladder and the anterior wall of the vagina become stretched backwards and sideways, and bulged downwards and backwards. The anterior end of the base is fixed. The uterus is at the same time necessarily carried further back from the pubes. The anterior wall, which cannot be bulged forwards, is simply elongated in upward and lateral directions, so that the apex of the triangle formed by the distended bladder is above the upper border of the pubes, its exact position depending on the degree of distension of the organ. The posterior wall—more freely movable than the other two—is extended upwards, downwards, and laterally. It is also bulged considerably backwards. The amount of elongation and bulging of course depends upon the amount of distension of the organ.

The neck of the uterus is attached to the posterior inferior angle of the bladder for about three-quarters of an inch by cellular tissue, which is limited above by the reflection of the peritoneum from the bladder to the uterus, and below by the anterior wall of the vagina. This connecting tissue is very loose when the bladder is empty, and admits of a considerable degree of motion in the cervix uteri. When the bladder is distended, the neck of the uterus is necessarily much more firmly attached to the bladder. The vagina is a tube collapsed from side to side at its external orifice, but immediately within the orifice and throughout the remainder of its extent is collapsed antero-posteriorly. The anterior and posterior walls are in contact with one another. Into the anterior wall near its inner end the cervix of the uterus is inserted. The posterior wall of the vagina, from the external opening to the point where it comes into immediate contact with the anterior wall of the rectum, forms an inclined plane which looks forwards and upwards. This inclined plane is formed by the muscles, fat, and fascia which are interposed between the lower part of the vagina and the lower part of the rectum. It is (the inclined plane) considerably longer in virgins than it is in women who have borne children. Having reached the anterior wall of the rectum, the posterior wall of the vagina runs upwards and backwards in front of the rectum, separated from it by the peritoneum lining Douglas's pouch only, and reaches the posterior surface of the neck of the uterus at a point somewhat higher than the point of insertion of the anterior wall of the vagina in the uterine neck. To the upper part of the posterior wall of the vagina—one on each side—the so-called utero-sacral ligaments are attached, and between them sinks a pouch of peritoneum called Douglas's pouch, which varies in depth in different women. The insertion of the utero-sacral ligaments into the posterior wall of the vagina and the interposition of Douglas's pouch between the upper part of the vagina and the rectum admit of a considerable degree of movement in the cervix of the uterus.

For my present purpose it is not necessary to describe minutely the conformation of the rectum. Suffice it to state that, proceeding from the anus for an inch or an inch and a half upwards and forwards towards the vagina, the rectum suddenly bends backwards and upwards at right angles to its former direction, so as to direct its course to the hollow of the sacrum, and then, turning to the left, it reaches the left sacro-iliac synchondrosis. As stated above, the rectum is not immediately connected with the uterus, but mediately through the vagina. Thus we see that the cervix of the uterus is, from its loose mode of attachment to the neighbouring organs, capable of a considerable degree of movement in all directions.

The fundus of the uterus is inserted between the folds of the peritoneum forming the broad ligaments, and appears free in the cavity of the pelvis. The lateral movements of which it is capable are, however, but slight; but it moves freely within certain limits in an antero-posterior direction. These limits, as well as the elevation and depression in the pelvis of which the organ is capable, it is our object to fix.

Examining first of all, then, that condition of the pelvic organs in which the bladder and the rectum are both empty, we find that the uterus occupies the following position:—It is situated low down in the pelvis; the cervix rests on the top of the inclined plane formed by the posterior wall of the vagina; the vagina is slightly inverted at its upper part, both anterior and posterior culs-de-sac being somewhat more marked than in any other normal position of the uterus; the body of the uterus rests on the empty rectum on the lower part of the sacrum and coccyx. The organ is easily movable in all directions; so much so indeed that, as a rule, the finger examining in the vagina invariably pushes it from the position which it normally and naturally occupies. It is only by the greatest care and gentleness for this reason that this position can be detected by vaginal touch. This position is one of retroversion; but it is not accompanied by flexion. The canal of the uterus is straight.

Now let the rectum be gradually filled. It is found that, as the rectum becomes distended, the inclined plane formed by the posterior wall of the vagina gradually diminishes until it has completely disappeared; if the distension be carried on still further, the posterior wall of the vagina is bulged forwards and laterally extended. Whilst this has been going on, the uterus has been gradually elevated in the pelvis; the cervix has been carried upwards further from the ostium vaginæ; the fundus has been raised and pushed forwards until the long axis of the organ has become perpendicular to the plane of the brim of the pelvis. In fact, the organ now occupies the axis of the pelvic inlet. Let the rectum be a little more distended, and the fundus, which is unsupported on its anterior surface, falls forwards, and takes a position immediately behind the symphysis pubis. The os and cervix are far back, high up, and directed backwards and slightly downwards. The whole length of the organ rests on the firm support formed by the bladder and the anterior wall of the vagina. The position is one of complete anteversion, without any flexion.

While the rectum remains full let the bladder be gradually distended. As the organ is filled the fundus of the uterus is gradually raised from the pubes and pushed backwards and upwards towards the rectum. As distension proceeds the fundus of the uterus becomes separated from the bladder. This is a necessary result of the manner in which the bladder distends, and of the manner in which it is united to the uterus.

The cervix of the uterus is closer to the bladder; the

fundus of the uterus becomes, consequently, inclined backwards. It meets with resistance from the distended rectum, and the uterus becomes slightly bent forwards. This antecurving of the uterus is due entirely to the resistance offered by the full rectum to the natural backward inclination of the body of the uterus. The canal of the uterus is in this position of the organ slightly curved forward, and this is the only normal position of the uterus in which the canal takes such shape.

In this position, which is the highest the uterus can naturally assume, the fundus is somewhat below the plane of the brim of the pelvis. It never extends above the plane of the pelvic brim, nor even reaches its level, but it extends considerably beyond a line drawn from the promontory of the sacrum in continuation of the anterior surface of the spinal column.

Now let the rectum be quite emptied. As the contents of the organ flow out the fundus of the uterus falls backwards and downwards into the hollow of the sacrum. The whole organ is borne somewhat further back, and descends at the same time in the pelvis, for the bulging forwards and distension of the posterior wall of the vagina disappears, the posterior vaginal wall falls back on the empty rectum, and the vaginal inclined plane reappears. Simultaneously with the sinking of the posterior wall of the vagina on the contracting rectum there is a sinking of the anterior wall of the vagina and base of the bladder on the posterior wall of the vagina. The base of the bladder and anterior wall of the vagina become more bulged in a downward and backward direction; in fact, the whole organ, with the uterus, has sunk backwards and downwards to occupy the space left by the contracting rectum. On examination per vaginam, the distended base of the bladder can be easily felt; the uterus can be felt far back and high up, but not in so elevated a position as when the rectum is full. The uterus is situate further from the pubes in this position than in any other. The position is one of retroversion without flexion, the canal of the uterus being straight.

The four positions above described are the four extreme positions which the uterus can normally assume—the lowest, the foremost, the highest, and the hindmost. In passing from the lowest through the hindmost, and the highest to the foremost, position, the fundus of the uterus describes an arc of a circle (?), whose governing angle is about 120 to 150 degrees, and the cervix of the uterus forms an arc of a much smaller circle (?), whose governing angle is much less. From these extremes the intermediate position of the uterus may be easily deduced.

The application of the above to the explanation of the production of malpositions I hope to give in another paper.

Reviews and Notices of Books.

Du Traitement des Plaies en général et en particulier d'un mode nouveau de pansement antiseptique par le Coal-tar et le Charbon. Par le Dr. LOUIS BEAU de Toulon. pp. 131. Paris: J. B. Baillière et Fils.

THE recent investigations that have been made by physiologists and biologists on the development of the lower forms of animal and vegetable life are beginning, as usual, to react upon the general doctrines of pathology and the treatment of disease, and in the work before us we have an attempt, on the part of a conscientious worker, to put before the profession the results of his observations on a limited part of the subject—that, namely, of the antiseptic treatment of wounds. The treatment of wounds in general has for the most part been rather curtly dismissed by English writers on surgery. Even such authors as Fergusson and Skey devote but short space to the dressing of wounds, partly, perhaps, believing that this can best be learnt at the bedside, but partly also from the extreme simplicity of the dressing they recommend. Before Lister's observations, cold-water dressings, the application of astringents (as nitrate of silver), poultices, and some unctuous applications were all the measures that were in common use. Since, however, the disadvantages of admitting air to suppurating wounds began to be recognised, a multitude of plans have been suggested, all of which have for their chief object the prevention of the entrance of those germs which alone render pus a poisonous material; and M. Beau gives a very full account of most of those that have been proposed, including the pneumatic mode of occlusion of M. Guérin, the cotton-wool dressing, the "aspiration continué" of M. Maisonneuve, solution of common salt, glycerine, and alcohol. The central topic of the work, however, is the treatment of open wounds by a peculiar compound, to which M. Beau has given the name of *l'emulsion de coal-tar saponiné*. This fluid is prepared by obtaining an alcoholic tincture of saponine by boiling 2000 grains of panama bark (Quillaya saponaria) in eight litres of alcohol and filtering. To 2·4 parts of this tincture one part of coal-tar is added, the mixture being allowed to digest in a sand-bath for eight hours and then filtered. In use it may be lowered by the addition of an equal quantity or twenty times its volume of water, according to the strength required; and M. Beau speaks in the highest terms of its powers as an antiseptic, whilst it is almost destitute of any irritant action. He also makes use of animal charcoal saturated with coal-tar as a dressing. Over this is placed a thick layer of charpie steeped in coal-tar, the evaporation from which is prevented by some impermeable material, as oiled silk or thin gutta-percha, and over all he runs a bandage. We would just ask whether all this is really required, and whether there is not likely to be some inconvenience from the heat of the mass of dressing. It may perhaps be advisable in towns and town-hospitals, but in country practice, where fresh air is obtainable, less, we think, will be found ultimately to be sufficient. At all events, some well-known surgeons obtain good results in this country by abolishing dressings altogether, and exposing the wound, if simple, to the air. There is a good section on hospital gangrene, of which M. Beau has had large experience.

An Inquiry into the Theory and Practice of Antiseptic Surgery. By JAMES CUMMING, M.D. Edinburgh: Printed by Oliver and Boyd.

A SENSIBLE and well-written little book. The author first considers the germ theory, points out the arguments favouring the existence of organic material capable of acting as a ferment or of producing putrefaction in the air, and describes the various agents which can either destroy these organisms or at least prevent their development. Amongst these he mentions chlorine, chlorinated lime, chlorinated soda, permanganate of potash, carbolate of lime, preparations of sulphur, logwood, charcoal, sulphite of soda, iodine, bromine, hydrochloric acid, green vitriol, nitrous acid fumes, vapour of vinegar, &c.

Dr. Cumming then proceeds to give the rise and progress year by year of the application of antiseptic agents in surgery up to the spring of 1865, when Professor Lister first used carbolic acid according to the antiseptic principle in a case of compound fracture, which was, however, unsuccessful, owing to improper treatment. Another case was treated in August, 1865, with liquid carbolic acid. This made a good recovery. Strong carbolic acid was used in these cases, but, as Dr. Cumming justly observes, it has certain disadvantages, such as, for instance, the washing away of the acid by a prolonged oozing of blood, and also its volatility, thus necessitating the application of some protective material. After having described the treatment of compound fractures by converting them into simple ones by the aid of the antiseptic dressings, the author shows how true is the doctrine of John Hunter, that "if you

allow the clot of blood over a small wound in a compound fracture to form a crust, the blood beneath becomes organised and absorbed, as in a simple fracture," the great advantage of these dressings being, that they not only allow the clot to become organised but also the crust.

Simple abscesses and abscesses in connexion with joints and diseased bone are next treated of, the mode of dressing them antiseptically being fully described. The author deservedly praises an injection of a solution of chloride of zinc for sinuses as at least a means of arresting putrefaction. One of the most important paragraphs relates to the ligature of arteries with antiseptic catgut. We cannot but regret that the author has not given us details as to the absence or occurrence of secondary hæmorrhage after the use of catgut. Our own confidence in this form of ligature is very great, and we should have been glad to have had Dr. Cumming's experience to compare with our own.

Fermentation and putrefaction, and their relation to the production of erysipelas, hospital gangrene, and pyæmia, form the concluding paragraphs of this interesting *brochure*. The facts brought forward are to us convincing that in cases where the antiseptic treatment succeeds liability to the above diseases is reduced to a minimum.

Tablets of Anatomy and Physiology. By THOMAS COOKE, F.R.C.S., Assistant-Surgeon to, and Senior Demonstrator at, the Westminster Hospital. London: Longmans. 1873.

THESE tablets present, in the fewest words and plainest language, an analysis of all important points, and show at a glance the general outlines of the subjects of which they treat. The anatomy consists of thirteen tablets, and includes that of the eye and ear, with the minute structure of the cochlea. The physiology treats, in twenty-six tablets, of the circulation, respiration, and animal heat, and is the first of the three parts which are to complete this portion of the work.

In about one-tenth of the space they contain the matter which is found in the most accredited standard works, and will prove of material assistance to the attentive and industrious student in revising and impressing on his mind what he had previously learned.

The author is evidently a sound teacher, and has constructed these tablets, which are concise, co-ordinate, and complete, in accordance with his views on the art of teaching. We have much pleasure in recommending them.

The Monthly Microscopical Journal. Edited by HENRY LAWSON. July, 1873. London: Hardwicke.

THIS number contains a paper by Mr. Stephenson "On the Optical Appearances presented by the Inner and Outer Layers of Coscino discus when examined in Bisulphide of Carbon and in Air"; showing that determinations of the nature of certain objects may be made by examining them in different media—a line of inquiry that is well worth working out. Mr. Kilton contributes a paper "On Aulacodiscus Formosus." Mr. Wenham concludes the long discussion he has had with Dr. Woodward and others upon the Measurements of Immersed Apertures. Dr. Braithwaite continues his researches on the Bog-mosses. Dr. Royston-Pigott contributes a paper "On the High-power Definition of Minute Organic Particles"; and Mr. Atkinson gives an account of researches made on various fluids with a view of determining the best methods of preparing the Brain and Spinal Cord for examination.

MR. HEBER D. ELLIS, M.R.C.S. Eng., has been appointed a Justice of the Peace for the town and county of the borough of Poole.

REPORT OF The Analytical Sanitary Commission ON DISINFECTANTS.

No. II.

WE have now to consider some of the more important of the liquid and solid disinfectants, taking advantage, in our survey, of the theoretical principles which we have already adopted. The destructive disinfectants may conveniently be taken first; and first among them those which involve the use of chlorine.

Chloride of lime has already been mentioned, and the purposes to which it may properly be applied. In its natural state it has but little value as a disinfectant; its smell, or rather the smell of the hypochlorous acid which it evolves, is disagreeable; and it must be used in somewhat immoderate quantity to be of any use.

Chloride of soda is a mixture of chloride with hypochlorite of sodium, and is prepared by the action of chlorine on soda, and is therefore analogous in composition to the lime compound. It was proposed as a disinfecting agent by Labarraque in 1822. It is far more soluble in water than the lime compound, and possesses in this respect an advantage over the latter. It has, however, but little practical importance.

Collins's disinfecting powder is a mixture of chloride of lime with sulphate of alumina. The use of the powder depends on the gradual liberation of chlorine by the action of the sulphate, the action being of course similar to that which takes place when chloride of lime is treated with an acid. Though this preparation is an improvement on the simple chloride, it is obviously liable to all the objections which have been urged against the use of chlorine.

Condy's disinfecting fluids.—It is well known that these beautiful green and violet solutions consist respectively of alkaline manganate and permanganate. Mr. Condy, of Battersea, has the merit of having introduced them to the general public. Their action depends on the ease with which they give out a portion of their oxygen to products of putrefaction and other oxidisible matters. Much controversy has taken place with regard to their value, and it is probable that, as usual, there have been over-statements on both sides. At the first glance there is much to recommend them. They are harmless (at any rate in a state of dilution), have no odour, and their action admits of simple, though somewhat rough, measurement by the loss of colour which they undergo when deoxidised. Then they are undoubtedly good deodorisers, and, altogether, it is not wonderful that they have been favourites both with scientific and unscientific men, especially when we consider their beautiful colours. But, on the other hand, it has recently been asserted by Dr. Crace Calvert that the permanganates, in spite of their power of destroying the foul-smelling products of putrefaction, do not, in the diluted state, destroy the life of low organisms, and have therefore no power to arrest putrescence. Their value as true disinfectants must therefore be regarded as somewhat doubtful. Lastly, we must remind our readers that Dr. Frankland showed some years ago that the organic matter of water is very imperfectly destroyed by permanganate of potash, even in the presence of sulphuric acid, a fact which has been confirmed by subsequent and independent experiments, and which has led to the total disuse of the old method of testing water.

In spite, however, of what has been said, we by no means

assert that the manganates and permanganates are destitute of hygienic value. Their power as disinfectants is denied by many, and is still open to serious question, but for minor purposes they undoubtedly have their use. Very weak permanganate is a pleasant wash for sweetening the mouth, and may often be used in this way in the sick room. And the addition of a small quantity to a bath will remove the disagreeable smell which the skin is apt to emit, especially in some diseases.

It is claimed for these salts that they act "by means of ozone." This is a scientific error. They are oxidising agents, and nothing more. The oxygen they contain is not ozone, and there is no evidence to show that ozone has anything to do with their remarkable activity.

Ledger's fluid is merely permanganate of soda, and can therefore claim neither novelty nor originality.

Chlorosone is the somewhat fanciful title given to the "last new thing" in disinfectants. It has been patented, and is described in the specification as a mixture of alkaline permanganate with alkaline hypochlorite and chloride; and we find by analysis that the description is accurate. In such a mixture the ingredients would preserve their respective properties, and it therefore appears fair to describe the new fluid as possessing the advantages and disadvantages incident to the permanganates and hypochlorites. We do not look upon the introduction of the hypochlorite as an important improvement. The new agent emits chlorine slowly in its natural state, and rapidly if treated with acid, and is therefore, it may be presumed, a little more active than the permanganates, which, however, will also yield chlorine if treated with hydrochloric acid. But we see no reason to suppose that any quantity that could in ordinary cases be used would arrest infection, or produce true disinfection of houses, clothes, or water.

We come now to liquid and solid antiseptics, to some of which, for reasons which we have already stated, we ascribe a very high importance. It is impossible to allude to all that have been suggested, or even actually used, and it is unnecessary for our present purpose to consider substances, such as common salt, saltpetre, vinegar, alcohol, and sugar, which owe their importance as antiseptics solely to their relation to dietetics. We commence with metallic salts.

Sulphate of iron, or copperas, is a well-known and useful antiseptic, which possesses also some power as a deodoriser. It has been extensively used in consequence of its cheapness and the ease with which it can be procured everywhere. For use in houses it is hardly to be recommended, as it produces ironmoulds on linen, &c., and is, moreover, less energetic than other agents which can easily be procured. But it answers well for the disinfection of cesspools, and its cheapness is here an item of importance. In a minute on Disinfection, published at Oxford in 1871, it is directed that half a pound of the crystals dissolved in two quarts of water shall be used for the disinfection of every cubic foot of filth. The disinfection of a midden may be maintained, after it has once been accomplished, by the daily addition of a solution of two-thirds of an ounce of the crystals for every individual who uses it.

Chloride of iron, chloride of manganese, alum, and many other salts have been used or suggested as disinfectants, but they do not appear to present any great advantages over sulphate of iron. The common use of Weldon's process, by which manganese is regenerated for the manufacture of chlorine, will probably act as a bar to the use of the chloride of manganese.

Sir W. Burnett's disinfecting fluid is well known to be a slightly acid solution of chloride of zinc. It is a most powerful and thorough disinfectant. In the experiments of Dr. Crace Calvert, to which we have before referred, solutions of albumen were mixed with various reagents, and the time required for the production respectively of fungi and vibrios was noted. The only agents which entirely prevented the development of vibrios during the course of the experiments were the chlorides of zinc and mercury, and the tar acids. The pure tar acids likewise prevented entirely the development of fungi, but the two chlorides above-mentioned hindered the latter development in a very remarkable manner. The best use of Burnett's fluid is for direct application to cesspools, night-chairs, the bilge-water of ships, &c. The great objection to it is found in the fact that it is a deadly poison, and that serious accidents have repeatedly arisen from its having been taken internally by mistake. It would be wise to print the word "poison" in larger type on labels and wrappers.

Crewe's fluid also contains chloride of zinc. It is, however, neutral, and therefore yields a precipitate on dilution with water. We do not regard this peculiarity as an advantage.

Chloralum.—This much-vaunted fluid is a solution of chloride of aluminium. It possesses one advantage, and one only, as we think, over chloride of zinc: it is not poisonous. Otherwise it appears to be greatly inferior to the zinc salt, although it certainly possesses considerable antiseptic power. It is colourless, and, like all the mineral antiseptics, is destitute of odour. These advantages are very great, and seem to point to the fluid as well adapted for the night-chairs of sick rooms, where bad smells are often serious evils, and where there is peculiar danger of a poison being given in mistake for medicine. The real disinfecting value of chloralum is, however, hardly as yet made out to our satisfaction.

To all the foregoing antiseptic disinfectants one common objection applies—they are all non-volatile, and can, therefore, only act in a partial manner at best on foul air. Now it is true that the first object in disinfection should always be, as we have pointed out in former articles, to avoid or neutralise the foul causes which produce foulness in the air of houses; but as, unfortunately, we are often powerless to touch those causes, at any rate for a time, it is necessary in many cases to have recourse to volatile agents which shall do something towards purifying the air. We have already indicated sulphurous acid as possessing a high value in this respect, but its use is limited in consequence of its irritating and disagreeable smell. Of far greater importance—of greater importance, indeed, than any other disinfecting agent—are the two curious substances known as carbolic and cresylic acids, or, more accurately, as phenol and cresol. These substances have an imperfectly acid character, and constitute the bulk of the acid portion of coal-tar. Cresylic acid appears to be rather more active than carbolic, and the impure carbolic acid of commerce, which contains both, is therefore preferred by some to the pure crystals. The antiseptic powers of these substances are wonderful, and, if space permitted, we might quote numerous experiments which have been devised to test them. But we must be content to refer, as especially applicable to our purpose, to the report of Mr. Crookes, already cited, on the Cattle Plague,* which teems with interesting experiments and suggestions; to Dr. Crace Calvert's researches (Proc. Royal Society, vol. xx., and *ante*), and to the recent paper by Plugge (Pflüger's *Archiv*, vol. 538), in which the previous experiments of others are in the main confirmed.

Carbolic acid.—The acid itself is made by several makers, and can be obtained of various degrees of purity. Samples obtained from well-known makers can, as far as we have ascertained, be trusted. It is very poisonous, but its smell is so powerful that there should not be much danger from its use, with reasonable care.

Calvert's disinfecting powder consists of carbolic acid mixed with some neutral powder. It is a convenient form in which to apply the acid to urinals.

McDougall's disinfecting powder contains carbolate of lime mixed with sulphite of lime or magnesia. When treated with an acid, carbolic and sulphurous acids are of course evolved, and the advantages of both secured, but in the state in which it is sold it has the disadvantage of being non-volatile.

Bobœuf's sodic phenol, a French preparation for which Messrs. Newbery and Sons are the English agents, is a solution of what is commonly known as carbolate of soda. It is of good quality, but does not present any particular advantages.

Mason's perfumed solution of carbolic acid—*Westerton's zymotic fluid.*—These are attempts to overcome the one great difficulty in the way of the domestic use of carbolic acid. Its smell is powerful and peculiar, and is disagreeable to most people, though not to all. In these preparations the smell of the dissolved acid is pretty successfully masked, and although it must not be forgotten that they are only solutions, and therefore require to be used pretty freely, it may be hoped that they will prove to be available in the sick room. Westerton's preparation contains ether.

* This Report has, we believe, been reprinted.

While freely admitting the incompleteness of our list of disinfectants, we think it better now to leave it in our readers' hands, rather than confuse the matter unnecessarily. We have not described the mode of applying disinfectants which are private property, because full directions are, in almost every case, given with the bottle.

REPORT UPON THE METROPOLITAN POLICE-CELLS.

Few matters are more important to Londoners than the police arrangements, yet there is a very general ignorance of all particulars relating to them. It is difficult to explain why the operations of the police should appear, as they do, so mysterious to those who maintain them. The usual absence of any correct knowledge respecting the treatment by the police of persons found insensible in our streets can scarcely be attributed to indifference on the part of the public, for who can tell at what moment insensibility may not throw him on the hands of the police for safe keeping? As such safe custody may not unfrequently necessitate detention in a cell, it appears high time to raise the veil which so often allows the facts connected therewith to be misrepresented. Before giving the results of our recent inspection of the cells at several metropolitan police-stations, we mention for the consolation of all who dread the possibility of being lodged therein that the horrors of a London police-cell, *per se*, are purely imaginary. Anxious to ascertain the truth regarding the treatment by the metropolitan police of persons found incapable in the streets, we sought personal observation of the facts, and for this the Commissioner afforded us every facility.

Purposely selecting the most unfavourable times for an unexpected inspection of police-cells, we visited several of the metropolitan police-stations on the morning and night of a very hot Sunday, choosing, among others, Bow-street and Kennington-lane Stations, which are respectively the most ancient and modern in the district. In every instance the cells were scrupulously clean and remarkably free from smell, though some had been occupied since the previous day. Besides artificial ventilation into a shaft which runs over each row of cells, every cell door is fitted with four panels of pierced iron grating, and opens into a very airy passage.

At Bow-street and elsewhere some cells have been fitted with windows which open into a well-lighted corridor, and thus their remediable darkness, referred to by Mr. Tallack as being perhaps the only serious defect of construction, is being promptly remedied. The cells are pretty uniform in shape and size, usually nine feet long, six wide, and eight high, thus affording to a single occupant within twenty feet of the cubic space allowed in the metropolitan section houses, and almost double the regulation quantum for metropolitan lodging-houses. Each cell is fitted with a bench, watercloset, and an efficient warming apparatus. At each station one cell has a sloping wooden floor, on which persons dead drunk are laid. Only cases of misdemeanour are not confined separately, and it is scarcely ever necessary to put more than three of such into one cell; indeed, two in a cell would meet every ordinary occasion were not false charges sometimes brought by male prisoners against one another when so confined. We found only one cell with more than two occupants, and in that three males had been placed for the sake of companionship.

At Bow-street station a particularly cheerful apartment has been provided for those who, though requiring safe custody, may appear to merit special consideration; it is twice the size of an ordinary cell, and well-lighted through two windows.

For the continual observation and guidance of police on duty at stations, a copy of the following paragraphs of the order relating to drunken persons is hung up in each cell passage:—

"When being conveyed on the stretcher, or placed in the cell, the head is to be kept slightly raised by a canvas pillow underneath it.

"In every case where a person is brought to a station in a state of insensibility, whether supposed from drink or any other cause, the officer on duty at the station is to send for medical advice as soon as possible.

"Drunken persons are to be visited and spoken to in the cells every half hour, and if they become insensible, and cannot be roused, medical advice is to be sent for at once."

Thus it will be seen that no discretionary power is allowed to the police in the case of an insensible prisoner; but in practice, when an insensible or injured person has been taken to a police-station, he is usually detained in the receiving room, and neither charged nor removed to the cells until seen by a surgeon.

We give the following paragraphs from the metropolitan police orders *in extenso*, for the satisfaction of the public, as showing that, so far as regulations can, all has been done to prevent the possibility of the police blundering in their dealings with the insensible and injured.

"*Drunken Persons.*

"Persons are frequently found insensible in the streets, in reality suffering from apoplexy or other natural causes, the symptoms of which give them much the appearance of persons under the influence of drink.

"In all such cases the first thing to do is to try and arouse them by gently shaking them; if that fails the neckcloth and collar are to be loosened and the head raised a little, by which means breathing is made easier.

"A message is to be sent to the station for the stretcher and some further assistance.

"The police are strictly cautioned to be very careful in conveying persons apparently drunk or insensible to the stations."

"*Medical Aid.*

"In cases of casualties occurring to persons in the streets, such as accidents or sudden illness, the police are to take the persons to the nearest surgeon, apothecary, or hospital.

"Persons brought to a police station charged with offences and suffering from injuries, or those who are in custody and are taken ill, are to be visited by the divisional surgeon or the surgeon appointed for the purpose.

"When a divisional or other surgeon is called by police to a station, or attends elsewhere to visit a person suffering from injuries or severe illness, he is to be asked by the officer on duty at the station, or by the constable present, for directions as to the necessity for removing the individual to a hospital, infirmary, or other place.

"The certificate for medical aid is to be given at the time of attendance. If the name of the person requiring the medical attendance cannot be obtained at the time, a statement is to be so entered in the certificate, and the hour and some circumstance mentioned by which the case may be known if reference be required. The medical gentleman who attends at the station is to be required to sign the counterfoil of the certificate, with his medical qualification, without which signature no fee will be paid. The officer on duty is to ask any gentleman not known to him when he attends to state these particulars, and in case the gentleman attending is not qualified, to send for the nearest practitioner."

The completeness of the above regulations, and the care with which those referring to medical aid are drawn up, so as to ensure the employment of a qualified practitioner, stamp them as having passed the chief surgeon's scrutiny, and offer to the inhabitants of our metropolis the most satisfactory means for solving the ever-vexed question of "drunk or dying?"

When, as by the third paragraph of the Medical Aid Order, a surgeon is asked for directions as to the removal of an individual, we counsel him to consider, in the event of the patient being drunk, whether the annoyance of such a case in a hospital ward would not more than counterbalance the possible advantages of despatching him thence, instead of to a workhouse.

How is it that these measures, on the face of them looking perfect in black and white, are so often futile in practice? This question remains to be solved. We recommend it to the careful and immediate consideration of the medical and executive officers of the force, as its solution will be jealously sought by the public so long as the press, under the head of "Drunk or dying?" has to record the persistence of an old police scandal, which we had hoped to have seen extinct long ago.

THE LANCET.

LONDON: SATURDAY, AUGUST 9, 1873.

THE meeting of the British Medical Association, brought to a close yesterday, the proceedings of which occupy many columns of our journal, must be looked upon as by far the most successful gathering which has ever taken place. The meeting has been a successful one not only with reference to the body under whose auspices it assembled, but as evidencing the great and growing importance of the profession at large. The members have never on any previous occasion attended the meetings in such vast numbers—numbers which wellnigh proved overwhelming to the caterers of science and pleasure who formed the Reception Committee,—and never on any previous occasion has the flow of hospitality, both public and private, been so profuse. Many of the leading members of the nobility, the Lord Mayor, the scientific societies, and some of the public bodies, have vied with each other in welcoming the members of the Association to the metropolis, and have shown by their acts how high is the appreciation in which the profession of medicine is held in this country.

The Association has been honoured by the presence of many foreigners of the highest distinction, and the members of the profession in England have had the gratification of becoming acquainted with some of those whose names are "familiar in their mouths as household words," and to whose laborious researches scientific medicine has in these present times become so deeply indebted. Germany and France have sent us their brightest lights; and those who have had the good fortune to attend any of the scientific or social gatherings during the past week have been enabled to see a concentration of medical notabilities which has rarely been equalled. VIRCHOW (the greatest man that has adorned the profession of medicine since the days of our own HUNTER), LANGENBECK, BARDELEBEN, RINDFLEISCH, OSCAR LIEBREICH, NOEL GUENEAU DE MUSSY, DIEULAFOY, and many others whose names we chronicle elsewhere—each a host in himself—have all assisted at the proceedings of the Association.

The Council of the Association exercised a wise discretion in the selection of the orators who have had the honour of giving the addresses; and we are satisfied in the reflection that our scientific reputation has not suffered in the eyes of our foreign friends.

The addresses and some of the papers read in the sections have been fully up to the average of such productions; but we must defer till next week any comments upon their scientific bearings. Meanwhile we must content ourselves with congratulating the Council of the Association on the success of the present meeting, and the metropolitan members on the fact that London has sustained its reputation as the medical as well as the political capital of this country.

WE have received a copy of a very thoughtful and suggestive as well as eloquent lecture on Sanitary Science in Ireland, delivered before the Royal Dublin Society by the Regius Professor of Physic in the University of Dublin, DR. WILLIAM STOKES. The lecture is an introductory one to a series of afternoon scientific lectures on Public Health. If we have taken the lead of our Irish brethren in this matter, it must not be forgotten that public sanitation is, on this side of St. George's Channel, but a thing of yesterday. The leader of a great political party has recognised the vast importance of this question, which may be truthfully said to underlie the very foundations of our national power and prosperity, to be bound up with the progressive development of our social system, and to be the main source of stability in the ground traversed by the steps of modern civilisation. If some recent events lent an impetus to the movement, it was still inevitable that the problems affecting the public health should be practically considered, if the England of the future was to maintain the position it had occupied in the annals of the past. The influence of the Royal Commission on the Sanitary State of our Army in 1857 was, happily, not to be circumscribed by the limits of an inquiry into the health of the army. Dr. RUMSEY, of Cheltenham, at a private meeting of friends many years ago, gave the first impulse to a movement which has attained such proportions that a Royal Sanitary Commission was appointed to examine into the public health and the state of the sanitary law. But Dr. STOKES may justly point with the pride he does to the share which Dublin has borne in advancing the good work: at the annual meeting of the British Medical Association in 1867, in petitioning for the appointment of the Royal Commission of Inquiry; and subsequently by the Board of Trinity College instituting a qualification of high order in State or Preventive Medicine—the only one of the kind as yet existing in these countries. The movement marks an epoch in our history, and the blessings which may be expected to flow from it will probably remain when the political landmarks that are the boast of this age shall have passed away. We agree with Dr. ACLAND that the great qualities of a people depend in large measure upon the physique of the nation; and that, "so far as national health is concerned, there is no possibility of exaggerating the importance, not to our own country alone, but to the world, of fostering and caring for the body of man." Statistics, valueless as they may be to settle some questions, form the basis on which the whole superstructure of recent legislation in this respect rests; and when we have the registration of the death-rate supplemented by a registration of sick-rate of each locality, we shall have gained all that is practically possible in the way of obtaining a measure of local unhealthiness. Dr. STOKES quotes from Dr. ACLAND'S address to the Social Science Congress a list of details, to which he has added a few particulars, that must pass under the control of the Minister of Health. He then goes on to answer the question why the organisation of charities appears in this list. The answer is, he says, because the great national charity is the Poor Law, and destitution so affects public health that the Minister of Health must necessarily be the Minister of the Poor Laws also. He then traces in the facts of the famine fever of 1847 the intimate connexion

between wide-spread destitution and national disease. In that time of panic, error, and confusion, the poorhouses of Ireland became the great foci of disease, owing to their overcrowding, the evils of which were increased by the congregation of masses of people at public works from a mistaken politico-economical theory, and also at depôts for the distribution of food. To these circumstances, as is well known, Dr. GRAVES mainly attributed the spread of fever in 1847. In the city of Cork, 2130 persons died in four months in one overcrowded union workhouse. In this building the inmates were put three, four, and five in a bed, and in the convalescent ward there were forty four beds for one hundred and twenty-five persons! "The deaths in the workhouses, auxiliary workhouses, and workhouse hospitals during the year 1847, as returned by the masters and medical attendants, amounted to 66,890. The general total for the ten years of 1841 and 1851 was 283,765—a number which yet does not represent the total mortality in the workhouses during the ten years, but which gives an annual workhouse mortality during that period of more than 28,000. Can any argument be stronger than this," adds Dr. STOKES, "to show the connexion between destitution and disease?—any evidence more overwhelming and appalling to prove the want of an enlightened medical police, and to show that the public health must be one of the chief cares of the State?"

The description given by Dr. STOKES of the cases of famine-collapse, as observed in Dublin, is short and very graphic. And the evils did not cease here; for emigration then received a new impulse, and the people fled from their native shores in tens of thousands, as if a curse had fallen on the land. And with what result? The overcrowding of the emigrant ships was frightful; malignant typhus was the inevitable result; and the number of emigrants flying from disease on land to meet it on the water was, in 1847, at the lowest computation, 74,539, and the mortality was greater than on shore. Well may he add that, could the land and sea give up their dead, what a history would be revealed of ignorance, maladministration, and wholesale slaughter in the 19th century! Dr. STOKES does not conceal his contempt for what he terms the camp followers of science—more ready to theorise than to investigate, whose dogmatism is only equalled by their ignorance, and who have adopted some special line of investigation without any previous training or discipline of mind. By such persons the causes of endemic or epidemic disease have been regarded as few, easily understood, and definitely settled; whereas they involve the most difficult problems in the world. The signs of hasty generalisations of sanitary science, falsely so called, and the tendency to attribute complex phenomena to a simple cause, are happily disappearing. As JOHN STUART MILL pointed out long ago, the principle of elimination cannot be applied in the same sense and in the same unqualified manner to the investigations of coexistences as to the successions of phenomena. To say nothing of sanitarians with a smattering of knowledge, medical inquirers are, even now, too much in the habit of applying one, and generally the last standing, in a sequence of causes as *the* cause; treating, in fact, coexistences as successions of phenomena. There is no proof, says Dr. STOKES, that dirt, in the common acceptance of the term, ever by itself gave rise to a single specific disease. If people live in fresh air, and are not overcrowded, have pure water to drink, and are not in destitution, dirt does not necessarily make them sick. And the same may be said of bad smells. Some weighty words are quoted from Dr. GRAVES as to the part which poverty plays; and Dr. STOKES adds that the real antagonistics to any successful preventive medicine are poverty and destitution, with their long train of evils. To prevent destitution in masses of men, and to promote their prosperity, is, however, the province of the social rather than of the sanitary reformer, who has to deal with the effects rather than the causes of destitution. Fortunately, sanitation can go on though obscure questions about disease remain unsettled. Dr. STOKES, while he takes care to guard against being considered as advocating any exclusive doctrine as to contagion being the sole cause of the spread of epidemics, nevertheless emphatically declares it to be a cause, and a very important one. On this point he dwells at some length, and illustrates it by references to Dr. GRAVES's and Professor HAUGHTON's writings in regard to cholera, and to the observations of Dr. FLINT on the introduction and outbreak of typhoid fever in North Boston in regard to the contagiousness of that disease. Dr. STOKES gauges the vital condition of the population of Dublin by its birth-rate, which exceeds its death-rate by only 1 per 1000 of the population annually! It is estimated that there are in Dublin not less than 1000 houses unfit for the habitation of human beings; and Dr. STOKES believes this estimate to be far below the mark. After touching upon many topics which involve abstract questions in a philosophical spirit, he comes to practical matters, and especially to that of overcrowding, which is the constant result of poverty, as one great exciting cause among many of injury to public health. He draws his facts in illustration of this from Liverpool, Nottingham, and Dublin. He next passes in review the measures to be taken against the importation of epidemic diseases; and he shows that were there no other reason for revision of the sanitary laws, the fact that such a system of prevention has never been brought to perfection in this country would be sufficient. As regards disinfectants, he believes that we must mainly trust for disinfection to cleanliness in the widest acceptation of the word.

AT the meeting of the Council of the Hospital Sunday on July 23rd it was understood that a few hundred pounds more would be received than were included in the accounts up to that day. This has proved to be the fact; accordingly, it has been necessary for the Committee of Distribution to consider how this sum should be disposed of. We are pleased to say that the action of the Distribution Committee in regard to its disposal has been wise and judicious. It is now a matter of notoriety that the only serious dissatisfaction which has arisen in connexion with the distribution of the Hospital Sunday Fund had reference to the treatment of dispensaries, which in the first distribution received less than £1000, while the hospitals received over £24,000. As far as the Committee of Distribution have the power, they have redressed this grievance. Their first award, announced at the meeting of the Council on July 23rd, was

final. It did not admit of reconsideration, though it did admit of criticism, which has been both extensive and severe. All that the Committee could do was to hear complaints, and apply any fresh sums received in mitigation of them. And this has been done. The Committee of Distribution courteously invited gentlemen interested in the dispensary question to meet them on Tuesday last at 3 P.M. at the Mansion House. At the meeting the Lord Mayor, in answer to a request, explained in a general way the principles on which the Committee had acted. He said that they analysed the accounts and reports of the hospitals and dispensaries, and that they divided the receipts into two classes—the strictly charitable, and, what might be called, the Property Revenue arising from dividends &c. and legacies. They found great difficulty in classifying the accounts, the mode of keeping them being different in almost every hospital. They considered the expenditure, how much money was expended for the benefit of patients, as in medical officers, drugs, &c., and how much in incidental expenses, as over secretaries, advertisements, &c. Chiefly they had regard to the wants of the institution, as judged by the outlay in favour of patients, and the proportion between income and expenditure. Where the receipts exceeded the outlay by thirty or forty per cent., they assumed that the institution did not want much help this year, whatever it might do next. The Lord Mayor further said that the Committee was bound by resolutions of the Council to the effect (1) that the system of distribution was to be based on the last three years' expenditure, after deducting income derived from endowments, realised property, and legacies exceeding £100; (2) that no institution be admitted to participate in the distribution of the fund if the Committee of Distribution found the cost of its management exceed a reasonable percentage of the whole current expenditure. The Lord Mayor said it would be difficult to say in more detail what influenced the minds of the Committee. The complaints of various speakers were heard, many of them throwing a new light on these institutions not to be gathered from a study of the balance-sheet.

We have since learnt that after the withdrawal of the representatives of dispensaries the Committee resolved to distribute the balance in hand, £400, amongst the dispensaries, by increasing the award already made by one-third. This sum will not remove all the dissatisfaction, but it will serve, we devoutly trust, to preserve the adhesion of the dispensaries to this great movement, and to show the disposition of the Committee to do all that is reasonable. There is little doubt that before next year the new Council to be elected will give fresh assurance that the fair claims of dispensaries shall be fully considered.

Leaving this subject for the present year, it only remains for us to express our great satisfaction with the initiation of the institution of Hospital Sunday. We are proud to have been any parties to this success. The Lord Mayor has had great honours heaped upon him, including a well-earned baronetcy, but he will think it not the least distinction of his year of office that he has, with great determination, set agoing this great movement, in which he has been ably helped by the Hon. Secretaries, Mr. R. B. MARTIN and Mr. E. H. CURRIE. Mr. W. H. RAMSAY, too, is worthy of very honourable mention as a prime mover in the matter. And though his services became too onerous and constant to remain merely honorary, it is not pretended that any money he may receive will really compensate him for the time and labour, and, we will add, business faculty, which he has expended in this work.

A VERY serious and alarming epidemic of typhoid fever has, during the last few weeks, developed itself in the parish of St. Marylebone—one of the wealthiest and (from a sanitary point of view) one of the best cared-for of the metropolitan parishes. We learn that, up to the present time, there are, within a very limited area, no less than eighteen families, all belonging to the upper middle classes, in which typhoid fever has broken out. We have also learnt that at present the only connecting bond between these eighteen families is the source of their milk-supply; and that with one or two exceptions they obtain, or were till a short time since obtaining, their milk from the same dairy—a dairy which has gained for itself a large trade and an honourable reputation by reason of the pureness and richness of its milk. There seems to be every likelihood that we have in this another instance of what one may call a milk epidemic; but, pending the investigation of the matter by the Local Government Board, it would be unwise to rush to conclusions, and it must be borne in mind that already there are one or two instances in which the persons attacked have obtained their milk from other sources than that which, with much appearance of truth, is at present pointed at as the source of infection. We feel sure that Dr. WHITMORE—whose letter we publish this week, and to whose request our readers will doubtless accord a ready response,—the tried and energetic medical officer of health for the parish, will not leave a stone unturned in the long and troublesome investigation which lies before him; but we nevertheless feel that it would be unfair to expect one man to undertake the grave responsibilities which are inseparable from such a task. It is clearly the duty of the Local Government Board to afford Dr. WHITMORE some help in this instance; and we trust they will lose no time in sending to his aid one of their experienced inspectors. In such a parish, in which so many medical men of eminence have taken up their abode, there should be no difficulty in selecting some one who might co-operate with the medical officer. Why should not Dr. BALLARD or Dr. GEORGE BUCHANAN, whose experience in investigations of this kind has earned for them an honourable reputation, be directed to assist him in probing to the bottom the causes of the present epidemic?

Medical Annotations.

"Ne quid nimis."

NAVY SURGEONS.

WE beg to call the attention of all intending competitors for the next examination for the Naval Medical Service, and in fact of the whole profession, to Sir Dominic Corrigan's letter on navy surgeons, in which certain monstrous grievances are detailed. It seems that no surgeon can resign his commission till he has seen actual service and proved himself worthy of the "indulgence," no matter what

may be his dislike to the service, or the pressing nature of any circumstances that may compel him to send in his resignation. Nay, more, in two or three of the cases mentioned in the letter referred to, the gentlemen concerned were sent, under threat of court-martial, to distant stations shortly after intimating their wish to resign. It is but charitable to suppose that the authorities only require to be acquainted with the anomalous state of things to insist on the discontinuance of it, and we hope that even yet something may be done before the next examination to mitigate the evils complained of. Be this as it may, we would caution all the candidates before appending their names to read over carefully, and endeavour to comprehend fully the significance of, the pledge they will be required to give of their determination to hold themselves in "readiness to proceed on duty abroad whenever required to do so." For ourselves, it is difficult to understand how the construction placed on the document by the Admiralty can be reasonably justified. Finally, we agree with Sir Dominic, that "if young men will continue to enter the navy as surgeons, they will do it at their own peril, for they have now knowledge of what is before them," and we would impress upon the authorities the importance of making the service as attractive as possible, in order to secure good and efficient men.

ADMINISTRATIVE AREAS.

THE Report of Mr. Stansfeld's Committee on Parish, Union, and County Boundaries will, as we judge, satisfy nobody outside of Gwydyr House. It is one more touch of "the fringe of a great subject," which, if not grasped firmly, had better be left alone. The evidence taken by the Committee is not published yet, and we are therefore without the means of knowing how far the Report is in accord with the evidence. We confess to some little astonishment at the dispatch which has been shown in this business, having regard to the fact that the inquiry, rightly considered, involved a fundamental element in sanitary as in other local administrative arrangements. The Committee have found it practicable to dispose of the whole affair in just twelve sittings, during which they appear to have examined sixteen witnesses, at least five of whom belong to the staff of the Local Government Board. It is perfectly clear to us that the only possible way of dealing with the complicated and extensive questions which are inseparably bound up with any satisfactory settlement of local administrative areas, is to appoint a Royal Commission, comprising a small number of persons chosen solely for their special competence to unravel the tangled web of conflicting areas and jurisdictions. Guided by certain broad principles, these gentlemen would be able to prepare a scheme which, sanctioned by Parliament and made unalterable except on the same high authority, would settle once and for all, at any rate for years to come, all existing difficulties and anomalies, giving us a simple set of areas suitable for sanitary and all other purposes of local administration. Mr. Stansfeld, to do him justice, saw the desirability of this method of procedure, and submitted a resolution to that effect, which was, however, negatived by the Committee, who preferred to cut rather than untie the Gordian knot by simply reporting in favour of extending the powers of dealing with parishes and unions now possessed by the Local Government Board. We sincerely trust that Parliament will decline to be guided by the Committee's opinion; which, if carried into effect, would no doubt redress a few petty anomalies, but would not touch the really important points at issue. It is worthy of notice that, while this Committee was sitting, an Act of Parliament was passed for extending the area of the municipal borough and urban sanitary district of Brighton by taking in East Preston, while it leaves the whole of Hove outside and still under the governance for sanitary purposes of three separate sets of authorities all constituted by former statutes. Can anything more clearly demonstrate the need for some competent supervision over the formation of local administrative areas such as a Boundary Commission would certainly devise, but which Mr. Stansfeld's Committee has proved its inability to appreciate?

NEW VIEWS ON DIABETES.

M. LECORCHÉ has submitted to the Academy of Medicine of Paris the following opinions respecting the nature of diabetes:—1. The current theories touching the pathology of diabetes refer only to certain varieties of glycosuria which have nothing to do with diabetes. They do not explain diabetic glycosuria. 2. Glycosuria, in diabetes, is only a secondary circumstance; the principal phenomenon is a tendency to disassimilation of protein substances. Diabetes may, in fact, be called azoturia. This disassimilation is the very essence of diabetes, and is characterised by the enormous quantity of urea which the patient is daily losing. 3. This protein disassimilation is the primary cause of glycosuria, which latter is simply an unimportant sequel of that cause. Protein disassimilation requires combustion, and during this combustion the oxygen leaves unattacked any glycosic substance formed in the economy; hence the existence in the urine of a quantity of sugar, which quantity increases with the amount of urea. 4. These views of the pathology of diabetes are of capital importance as regards the treatment, for they pave the way to a rational mode of treating the disease. The theories hitherto offered do not admit of such a course, as they refer only to glycosuria.

In viewing diabetes as M. Lecorché proposes (i. e., as azoturia, of which the glycosuria is the consequence) there is, he says, only one way of contending with the disease—namely, to endeavour, by every means in our power, to stop the loss of urea experienced by the patient. To attain this end we have only one mode of treatment at our command—the administration of cumulative remedies. Among these the principal are opium, arsenic, valerian, and perhaps bromide of potassium.

M. Lecorché promulgated these opinions before the Academy at the meeting of June 10th last, and promises to give further developments (and it is to be hoped experimental proofs) in the publication of lectures on diabetes delivered by him at the Faculty.

CHOLERA-INFECTED CLOTHES AND BEDDING.

THE current number of the *Sanitarian*, a new and well-conducted monthly journal published at New York and Chicago, contains the abstract of a paper by Professor Frank H. Hamilton on the summary method pursued by him in stamping out cholera at the Workhouse, Blackwell's Island, in 1866. The disease broke out in the night of July 26th in the workhouse, and 16 cases occurred within twenty-four hours. The number of new cases rose and fell from this date until the 2nd of August, on which day there were 33 new cases reported, making in all up to that date 127 cases. At the time of the outbreak of the epidemic there were 649 persons confined in the building. A careful inspection was made, the results notified to the Board of Commissioners of Public Charities and Corrections, and permission asked to introduce at once certain sanitary measures. Some hesitation on the part of the Board being apparent, Dr. Hamilton pressed the urgency of the case upon them, declaring that if full authority were given him in the matter the epidemic could be arrested in three days. This was said deliberately, because, Dr. Hamilton says,

"the special causes of the epidemic were apparent to me as they would have been to any other educated physician, and the remedies were within reach." It must be confessed, from the description given of the very *defective* sanitary arrangements existing in the building, that an intelligent person would not be likely to miss the special causes which chiefly contributed to the propagation of the cholera epidemic within the workhouse. Dr. Hamilton deserved great credit, however, for the judgment and decision he manifested in the matter, and practically he kept his promise. He was the chairman of the Committee of Medical Inspection of the Board. Isolated hospitals were, at his instance, established; the overcrowding was overcome. A code of sanitary regulations of a stringent character was adopted, and radical changes in the diet and in the forms and hours of labour were, at his suggestion, made. We need not dwell on the measures put in force; they were eminently practical and common sense, and they proved efficacious. But there is one statement to which we may advert, because it serves to point a moral. Through some inadvertence, the orders given for the management of the laundry were not literally carried out for several days. The infected clothing, instead of being at once placed in boiling water, was submerged in cold water for a few hours, often over-night, and then treated with hot water. "The result of this omission was that of 34 women employed in the laundry 12 died, 35 per cent. of the whole number."

ARMY RECRUITING.

THE *Army and Navy Gazette* contained a very sensible article last week on the growth of the recruit, based apparently upon the observations of an officer practically acquainted with the subject, which is one of much difficulty from a political rather than a medical aspect. From the latter point of view we do not think there can be much difficulty, for medical officers are pretty well agreed as to the physical characters of a good recruit; the difficulty lies in procuring them up to the desired standard. Our regiments make a very good appearance at the present time, but the men are not equal to those which composed the army that fought and won at the Alma. It is absurd to suppose that the class of youths one encounters occasionally in London with a sergeant at their head will ever develop into the material we require, and it is a matter for serious consideration what is the proportion of these undeveloped youths that are now taking the place of more vigorous and able-bodied men of former years? The points to be attended to in a recruit are his age, height, weight, and chest-measurement, which should bear a proper relation to one another. Boys of eighteen are physiologically unfit to carry the weights and perform the duties of a soldier, or to encounter tropical service. The lads recruited from a city, although they may answer the official requirements of the present regulations, do not come up to the standard that officers desire or the nature of soldiers' duties requires. It is quite true, as indicated in the article in our contemporary, that they may be smart, active, and intelligent as compared with the agricultural labourer or navvy, but they lack his strength, constitutional vigour, and staying powers. The town-bred youth develops rapidly and ages rapidly as compared with the rustic. He is an "old soldier" when he ought to be at his best, and the duties, and, it must be added, the temptations of a soldier as they exist in our army, with the changes of climate incidental to his life, tend to deteriorate his constitutional vigour and age him prematurely. More latitude should be given to the recruiting surgeon for the exercise of his judgment in the selection of recruits in the first instance, and greater care in the subsequent training of them when enlisted might be exercised in the second. We fear the time is gone by for the rustic in a smock-frock and well-blacked highlows to take to soldiering, but that is the type of man that makes a really efficient soldier. He is sound and strong in constitution if mentally slow to learn his duties, but when he has learnt them he is reliable and very slow to run away from the work before him. It is all a question of supply and demand, and if we cannot obtain recruits of the required standard who shall give reasonable promise of making strong and vigorous men, the price must be raised, or Englishmen generally will have to face the other alternative, and take a larger share of military duties than they have hitherto done. All wars, from those of Napoleon to those of the American Rebellion, up to the hastily-levied army of Gambetta, tell the same story—viz., that warfare requires to be undertaken by *men*, and that soldiers cannot be trained in a day. Meanwhile, we think "How shall we Recruit our Army?" would form as good a subject for a prize essay as most of those that are started.

SMALL FEES FROM HOSPITAL PATIENTS.

THE *Manchester Guardian* of July 17th has the following letter to the editor, headed "Doctors' Fees:"—

"Sir,—Last week a friend of mine took the wife of her gardener to the Eye Hospital. She stated that the woman could not pay half a guinea or a guinea for advice, but that she was able and willing to pay a small fee upon each visit. She was told that he must either receive a guinea or the patient must get a recommend to be treated gratuitously. The guinea was paid by the lady, with the understanding that it should include two visits, but that on the third visit a similar sum should be paid.

"It is very strange that the doctors of the Eye Hospital should say to the conscientious patient, coming with 2*s.* 6*d.* or 5*s.* in his hands, 'We won't take your money, but we will cure you for nothing; we will let our subscribers pay for you, but we won't let you pay for yourself.' One can scarcely conceive of a rule more opposed to the interests of the institution and the independence of the patients. Would it not be well for the subscribers to see to this?

"I enclose my name, and am, &c., W."

This letter raises two or three delicate questions. Should a hospital surgeon take a fee from a patient seeking his advice at the hospital? Should a hospital surgeon taking a fee under such circumstances abate the dignity of his status in consideration of the humble means of his patient, and take such a fee as a general practitioner might take at his own house? In other words, is a hospital surgeon to consider how best to preserve the self-respect of the patient or how to preserve his own? In the present case the applicant was not a fully-constituted hospital patient, inasmuch as she had not procured a hospital letter. Further, it is presumable that there was no great urgency about it, otherwise we should be disposed to say that the surgeon should have prescribed for the patient temporarily, with information as to how she was to become a hospital patient. The case is a common one, of a person in humble station needing a higher or more special opinion than that of the practitioner who generally advises her, for which she can pay half-crowns but not guineas. The dilemma raised is this, that she must either come under obligation to the hospital and receive relief gratuitously, or the hospital surgeon must come down in his fees as the general practitioner has to do. We have no hesitation in saying that such a case should be supplied with the best advice gratuitously at a public hospital, the subscribers and the surgeon alike combining to help. A gardener should make provision for ordinary sickness in his house, but if his wife has iritis, or glaucoma, or cataract, unless charity itself is to be superseded in the list of human virtues, she should be able to procure the advice and assistance of a prac-

titioner versed in such diseases. She cannot *pay* for such special services, and we see no harm, but good, in her having them gratuitously. We deny that she becomes a pauper by such a transaction, any more than a peer would become a pauper by being saved from drowning by a hardy sailor who leaped into the sea to save him. It is fitter, better on both sides, that the cataract should be cured gratuitously—or rather at the expense of the subscribers and the surgeon—than that the surgeon should receive half-a-crown for his work. The disproportion between the services and such a fee introduces a ridiculous element into a transaction which without the money element is creditable on both sides—special affliction on one side being met by special help on the other. Even in provident dispensaries there are honorary members of the staff of medical officers, whose services are entirely gratuitous.

PRACTICAL CHARITY.

ON Friday, the 1st inst., the inhabitants of Bolton demonstrated their respect and affection for an honourable member of our profession, Dr. S. T. Chadwick, and his wife, who have for many years past distinguished themselves by their generous liberality to the poor. Dr. Chadwick has indeed added to a deep professional knowledge the charms of a Christian philanthropy, and, with the assistance of his amiable wife, has always endeavoured to carry out the instructions of our Great Teacher. In 1863, when, through ill-health, Dr. Chadwick retired from the active work of the profession, he offered £1000 towards the building of a new hospital, and proposed at the same time that the old infirmary should be secured to the town as a library and museum, for which object he offered a further sum of £1000. These proposals, however, did not receive sufficient support to be carried, but in 1868 the doctor and his wife determined to erect model dwellings for the working classes, and an orphanage for the poor orphan children of Bolton. Towards the first scheme £10,000 were placed in the hands of Messrs. Rushton and Armistead, solicitors, and for the orphanage, £7000; afterwards £5000 were handed over by Dr. and Mrs. Chambers, in addition to the rents of the model buildings, which were required to be devoted to maintaining, clothing, and educating the orphan children of the Bolton union. The orphanage buildings are being erected on land given by the Earl of Bradford, and will form a street to which the Corporation will give the name of Peabody-street.

In gratitude for these and other benefactions the people of Bolton have erected a statue to Dr. Chadwick, which was unveiled on the 1st inst. The statue is in bronze, 10 feet 1 inch in height, standing on a pedestal 12 feet high, in the centre of which is a bas-relief design in bronze representing Mrs. Chadwick directing some children to the Orphanage. The celebration was made the occasion for a general holiday, and a large and enthusiastic procession marched to the Town-hall-square to witness the unveiling by Mr. James Barlow. Speeches were afterwards delivered in eulogy of Dr. and Mrs. Chadwick, who have earned an enviable reputation for practical benevolence during their lifetime.

VACCINATION IN SAXONY.

THE question is being mooted in this part of Germany of rendering vaccination compulsory. The Medical College has just been convened to decide on the matter. From the report placed before that learned body, it appears that the number of vaccinated individuals has been decreasing from 1866 to 1871. This tendency has been noted especially in manufacturing districts, where, however, in 1872, small-pox made a great many victims among non-vaccinated persons. The mortality, in fact, as regards the latter, was enormous, the deaths occurring principally among unvaccinated children. From 50 to 64 per cent. of those attacked by small-pox died, and these were all unvaccinated. In houses where both vaccinated and unvaccinated people resided, the cases of small-pox rose to 80 per cent.; but in the houses where all the inmates were vaccinated, the cases only amounted to 10 per cent. During the last war the soldiers already vaccinated, and revaccinated on entering the regiments, all escaped small-pox, though living in localities where the disease was rife, and sleeping in beds far from cleanly. It is stated that the German army lost 12,253 men by disease, small-pox figuring only for 261. Among the 13,344 sick of the Saxon army, only 123 cases of small-pox and other acute skin affections were returned. Hesse had 498 deaths from sickness, 33 of which were from variola. Bavaria, out of 1261 deaths, had 39 from small-pox; and Wurtemberg had not one case of small-pox out of 700 deaths from sickness. The Medical College concluded on compulsory vaccination, and looked upon revaccination as a natural corollary of the original operation. Out of 2184 revaccinated soldiers, the result was positive in 1025 cases.

THE HOME SECRETARY ON THE PAYMENT OF MEDICAL WITNESSES.

WE have repeatedly of late had occasion to remind our readers that they are not bound to attend as medical witnesses in civil cases unless, at the time of being served with the subpœna, reasonable expenses are tendered. The following letter, written by direction of the Home Secretary, is in answer to a complaint by Dr. P. Butler Stoney, of Holborn-hill, Millom, Cumberland, who was refused his expenses by the magistrate, though, in order to obey the summons, he had to hire a horse and drive sixteen miles. The letter has reference to criminal cases. If this injustice of courts of justice is to be removed it can only be by medical men applying the remedy indicated by the Home Secretary.

"Whitehall, July 15th, 1873.

"Sir,—I am directed by Mr. Secretary Bruce to acknowledge the receipt of your letter of the 12th inst., complaining that the magistrates at Bootle have refused to pay your fee for attending before them to give medical evidence in a criminal case, on the 12th inst., and I am to say that, in cases of summary convictions, the making or not making an order for costs is in the discretion of the magistrates, and the Secretary of State cannot interfere with them. The remedy is, that no person is bound to attend as a witness in such cases, though summoned, without a tender of expenses being made at the time the summons is served. The summons which accompanied your letter is herewith returned. "I am, Sir, your obedient servant,

"P. B. Stoney, Esq., M.D., Holborn-hill, Millom, Cumberland." "A. F. O. LIDDELL.

ADULTERATION OF COCOA.

MR. D'EYNCOURT has dismissed the summons against a grocer named Kirby, who was charged, under the third section of the Adulteration of Food Act, with selling cocoa adulterated with cane sugar, arrowroot, and starch, stating that there was no fraud at all in selling that which had been recognised by the trade for fifty years as cocoa, and that he felt it would be impossible to convict in the case. This decision causes us as much surprise as it does regret, for the statements of manufacturers that cocoa cannot be powdered without the addition of another substance is as contrary to fact as that the presence of starch assists the solubility of cocoa, whereas starch can only render it more miscible in water. The Act renders the sale of mixed food without notification penal, whereupon the manufacturers defend the grocers so selling the mixed article, and Messrs. Dunn and Hewett advertise that they "will not admit the

term adulteration." We fail to see why cocoa that has for fifty years been sold adulterated with starch should not come into the same category with milk which from time immemorial has been diluted with "Simpson"; both are mixtures, and as such cannot legally be sold without the notification required by the above-named Act.

EDINBURGH UNIVERSITY CLUB.

THE "capping day" dinner of this Club was held at St. James's Hall Restaurant on August 1st, 1873, at 7 P.M., Sir John Rose Cormack (of Paris), M.D., F.R.S.E., in the chair. Forty-six sat down. Among the members present were Sir William Fergusson, Bart., Professor Cobbold, Drs. Sieveking, Harley, Barlow, Webster, Woodhouse (of Reading), Barnes (of Epsom), Whiteley (of Cannes), Halley (hon. treasurer), and Mr. Richard Davey (hon. secretary). The chairman in very eloquent terms proposed the loyal toasts, the Edinburgh University and her Graduates, the Club, and the health of Sir William Fergusson. Sir John gave some graphic sketches of incidents that had occurred in and around Paris during the German siege, and stated that his experience had taught him how signally blessed our nation was in freedom from communistic contamination. Telegrams were interchanged after dinner between the chairman and Professor Turner, of Edinburgh, congratulating the newly-created graduates. Professor Cobbold, Dr. Lavies, and Dr. Halley contributed in no small measure to the success of this agreeable *réunion* by their excellent singing.

THE OUTRAGE IN RICHMOND PARK.

MARY WILLIAMS, the unfortunate victim of the murderous assault in Richmond Park, and now lying in the infirmary of that town, is making fair progress towards recovery, although her memory is an absolute blank from the moment of receiving the first blow until she found herself in bed. Her injuries are as follows:—A torn wound through the upper lip, with loss of three teeth (a fourth loosened, but still retained); two wounds, about an inch long each, on the forehead; a similar wound across the left eyebrow; a deeper wound (about three-quarters of an inch) on the left temple; a severe wound behind the left ear, at the base of the temporal bone; left ear torn through and part gone; five or six wounds on the top of the head, two of them down to the bone, which had a rough edge as if the outer table were knocked into the diploe; contusion of both eyes (which were swollen the next day or two so as to render her blind, but are now better); a slight bruise on the left shoulder and on the upper part of the right chest; and contusion of the left hand.

THE EPIDEMIC OF SMALL-POX AT LEICESTER.

OUR readers will remember the extensiveness and severity of the small-pox in Leicester twelve months ago. Dr. Blunt's Report of the Special Hospital gives another illustration of the importance of vaccination and revaccination in a community smitten with small-pox. The percentage of deaths amongst the vaccinated cases, even when the doubtful ones are included, amounted only to 3½, and without the doubtful ones to the very small proportion of 2½. The mortality amongst the unvaccinated was at the rate of 43 per cent. But the most important statement in Dr. Blunt's Report is that there was no case of small-pox occurring in a person who had been successfully revaccinated. All servants and nurses were revaccinated on admission, and not one was attacked with the disease. After this experience the anti-vaccinators in Leicester—if there be such an unreasonable class—should hide their diminished heads.

REFLEX MOVEMENTS OF THE UTERUS.

DR. SCHLESINGER (Stricker's *Med. Jahrb.*, Heft 1, 1873) gives the results of his continued researches on the reflex movements of the uterus. It will be remembered that he and Dr. Oser some time ago demonstrated that dyspnœic arterial blood induced contraction of the uterus, partly owing to the excitation of some centre situated in the cranium, since they occurred with much less energy after division of the spinal cord, but partly also from excitation of the excitable tissues of the uterus itself. Dr. Schlesinger now finds that he can induce uterine contractions reflectorially by electric irritation of the centric stump of any spinal nerve in from five to fifteen seconds. The reflection seems to take place, not in the spinal cord, but in the encephalic centre, since again it does not occur when the spinal cord is divided below the medulla. Schlesinger further shows that, although excitation of the nervous plexus surrounding the aorta causes uterine contraction, yet that this is not the only path by which the motor influence travels.

HYBRIDISM.

IN our contemporary *The Country*, for July 24th, Mr. J. W. Wood, F.Z.S., has given a drawing and a detailed description of a hybrid between a bald-pate pigeon and a silver bantam. Great pains have been taken to prove the parentage of the bird, and there can be little doubt that the case is a genuine one, although, as Mr. W. B. Tegetmeier has suggested, there are certain difficulties to be explained in the incubation period and rearing of the young by the parents, the method of which differs greatly in pigeons and bantams. We believe, however, that it is not uncommon for pigeons to tread bantams when both have been kept together, so that is not improbable the connexion is sometimes fruitful. Professor Owen examined the dead body of the bird, but stated that the sternum showed no trace of hybridism, although the general contour presented certain peculiarities of both parents.

THE CHOLERA.

WE have to congratulate the public on the fact that up to the time of going to press we have received no report of the occurrence of any case of Asiatic cholera in this country from any member of the medical profession.

THE well-meaning and excellent people who advocate the pursuit of medicine as a sphere for woman's labour will not be encouraged in their crusade against what they consider the narrow-minded and jealous obstinacy which endeavours to bar the entrance of female aspirants into the profession, by the knowledge that "Dr. Mary E. Walker has been appointed to a clerkship in the Treasury of the United States." We sincerely hope that the office is a sinecure. It may fairly be inferred from Dr. Walker's acceptance of the appointment that ladies of undoubted talents are not successful in acquiring medical practice in America.

THE Commander-in-Chief in Ireland once occupied a similar position in India, and he no doubt, in the exercise of his official powers, occasionally "came down" upon his subordinates in all branches of the service, and, if report speaks truly, the medical branch had its share. His lordship's time has come, apparently, to feel the weight of an official's fingers in cutting down his staff-pay and allowances for the period during which his lordship was absent from the scene of his military duties in excess of that for which pay during leave is allowed. Mr. Cardwell recently stated, in answer to a question from Mr. Anderson, that the amount retrenched in this respect was £753 11s., which we

presume will have to be refunded. Attendance in Parliament is not considered as equivalent to military duty on the spot, and staff-pay and allowances are stopped, though not regimental pay. This is in strict accordance, we believe, with the usages of the service as regards all officers of inferior rank to that of the Commander-in-Chief in Ireland, and it is carried out as far as officers on the Indian establishment are concerned.

THE students of St. George's Hospital have recently shown their appreciation of the labours of Mr. Pick by presenting him with a handsome silver claret jug. Mr. Pick has long made himself conspicuous as a teacher at St. George's, by the pains with which he has devoted himself to the real wants of his pupils.

HER MAJESTY THE QUEEN, as President, has appointed the Marquis of Westminster, the Earl of Bessborough, and Lord Penrhyn, vice-presidents of St. George's Hospital, in the place of the late Marquis of Westminster, Earl of Derby, and Earl Cadogan.

No fresh cases of cholera have occurred among the emigrants, who are now in a very satisfactory condition, and we may congratulate ourselves that we have, for the present at least, been saved from a general visitation of this serious malady.

FIVE skeletons, in a fair state of preservation, were lately dug out by some navvies employed on the Reading drainage works. They had presumably been in the earth for over two hundred years.

MEMBERS of the British Medical Association were, during the period of the meeting, admitted as honorary members of the Medical Club, Spring-gardens.

THE mortality in the metropolis last week included 375 deaths from diarrhœa and two from sunstroke.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE forty-first annual meeting of this Association, which has been held at King's College during the week, may be said to have really commenced on Monday, although the scientific business did not begin till the following day. As soon as the reception hall at King's College was opened on Monday afternoon an apparently endless stream of visitors literally besieged the clerks who were receiving the names of the members, and opposite each of the tables from which were distributed the various tickets and vouchers for the receptions and excursions, there stretched a black-coated "queue" of persons, all eager to make sure of obtaining the necessary tickets with as little delay as possible. This distribution continued till five o'clock on Monday, and was resumed the following morning, and went on without the least intermission the whole day. By three o'clock on Tuesday afternoon as many as 1350 tickets had been distributed for the Lord Mayor's reception (which seemed to be the most sought after of all the entertainments), and not a few were disappointed of obtaining cards. The applications for the dinner of the Association were so numerous that it was determined that a ballot would be necessary for the selection of the guests. The meeting which is brought to a close to-day was probably the most fully-attended of any that have been held by the Association. It is eleven years since the last meeting was held in London, and the present bids fair to stand pre-eminently out from among its fellows as did the last, when Dr. Burrows was the president, Dr. Walshe gave the address in Medicine, Sir James Paget that in Surgery, and Dr. Sharpey that in Physiology. It is paying no small compliment to those gentlemen whose addresses we publish this week, when we say—and we are sure our readers will readily endorse the statement—that they are in every way worthy of occupying the positions held by their predecessors in 1862.

The programme of science and pleasure provided for the members was much longer this year than then. In 1862 there were but two conversaziones (at the College of Physicians and the College of Surgeons); this year there were three conversaziones and a public dinner to be gone through, besides a long list of private entertainments, not a few of which, in the numbers of guests invited, nearly equalled the public ones.

The number of foreign guests was unusually large, and embraced many men of the highest distinction both in the Old and the New World. The following is a list of some only of the provincial and foreign members and guests who signed the books of the Association during the first twenty-four hours that they were open for signatures. The list is necessarily incomplete—to attempt to give a complete list would occupy far too much of our space,—but it will serve to show how widespread is the interest which is taken in the welfare of the Association, not only by practitioners in this country but abroad:—Dr. Jelley, Madrid; Dr. Howell Thomas, Swansea; Mr. Howatt, Lancaster; Mr. Jeston, Henley; Dr. Lush, Weymouth; Mr. Barham, Truro; Mr. Harris Butterfield, Bradford; Dr. Rixon, Dublin; Dr. Hassall, Ventnor; Dr. T. Robarts, Chester; Mr. F. Symonds, Oxford; Dr. V. Snow, Bournemouth; Drs. Desmond and Fitzpatrick, Liverpool; Dr. Meacham, Manchester; Dr. Andrew Davies, Swansea; Mr. Penfold, Brighton; Mr. Edward Lund, Manchester; Dr. Carter, Bombay; Dr. Chouston, Edinburgh; Dr. Leeson, Bradfield; Dr. R. W. Egan, Dublin; Mr. Thomas Good, Launceston; Dr. Jones, Machynlleth; Mr. Roberts, Portmadoc; Mr. Wales, Downham Market; Dr. Maclagan, Dundee; Dr. de Valcour, Cannes; Mr. Watkins, Newton-le-Willows; Dr. Cowan, Bath; Dr. W. Black, Edinburgh; Professor Virchow, Berlin; Dr. Béhier, Paris; Dr. Mapother, Dublin; Dr. Krenchel, Copenhagen; Dr. E. H. Sell, New York; Mr. Kirkman, Melton; Dr. Oppenheim, New York; Dr. Bardeleben, Berlin; Dr. Boddaert, Ghent; Dr. Fordyce Barker, New York; Dr. Slavinsky, St. Petersburg; Dr. Kenney, Birmingham; Sir Henry Cooper, Hull; Dr. Crighton Browne, Wakefield; Dr. Ravenhill, Birmingham; Dr. Josef Nagg, Klausenburg, Hungary; Dr. Mason, Bath; Dr. Franklyn, R.H.A.; Dr. Hill; Dr. Samuels, Liverpool; Dr. Waters, Liverpool; Mr. Arthur Brown, Tredegar; Mr. Marsack, Tunbridge Wells; Dr. Williams, Haywards Heath; Dr. Williams, Cheltenham; Mr. Baylis, Birkenhead; Mr. Hough, Cambridge; Mr. Bassett, Birmingham; Mr. Lipscombe, St. Alban's; Dr. Philip Frank, Cannes; Dr. Swain, Birmingham; Sir John Cormack, Paris; Mr. Tibbits, Warwick; Dr. Rumsey, Cheltenham; Mr. Carruthers, Northampton; Mr. W. Miller, Londonderry; Prof. Langenbeck, Berlin; Dr. A. Markheim, Paris; Dr. Matthews Duncan, Edinburgh; Dr. W. Roe, Dublin; Mr. Lawson Tait, Birmingham; Dr. Walters, Cheltenham; Dr. Weekes, New Zealand; Dr. Balthazar Foster, Birmingham; Dr. Reed, Manchester; Dr. Addenell Hewson, Philadelphia; Dr. G. H. B. Macleod, Glasgow; Dr. Swayne, Bristol; Dr. Morgan, Dublin; Mr. Mason, Stratford-on-Avon, &c. &c.

The arrangements made for carrying on the business of the meeting at King's College were fairly good, but, as in 1862, when the numbers were found almost too great for the College of Physicians, so again in 1873 the numbers present were far too large to be grappled with by the existing machinery, and even the vast hall of King's College afforded but scant accommodation for the members it has been called upon to contain.

FIRST DAY—TUESDAY, AUG. 5TH.

At 10 A.M., the real formal business commenced with divine service at St. Paul's Cathedral. A congregation of about 700, composed mainly of members of the Association, assembled under the dome of the cathedral. For some reason (unexplained) nobody was admitted into the choir excepting the officiating ministers and choristers, who had to struggle against acoustic difficulties, a circumstance which marred considerably the impressiveness of the service. Men-

delssohn's grand anthem, "Hear my Prayer," was apparently rendered with great ability, but much of the fine effect was quite lost upon the congregation.

At 3 P.M. the first general meeting of the Association was held at King's College. The hall was crowded to excess, and the heat and discomfort may well be imagined. The chair was taken by Alfred Baker, Esq., the President for the year that has now expired.

Mr. J. FOWKE, the General Secretary, read the minutes of the last annual meeting.

The CHAIRMAN, who rose amid hearty applause said:—Gentlemen, before I resign this chair to the distinguished surgeon who will shortly adorn it, permit me to congratulate the British Medical Association on the unparalleled prosperity and success of the past year. At no period in its history has its numerical increase been so rapid, since more than 600 names have been added to its membership. This fact is encouraging to its officers and managers, since it shows that its objects are catholic, and enlist the sympathies of all our medical brethren. To this progress all its branches have contributed, and in portions of the kingdom in which no branch exists there has been a disposition on the part of the profession to attach themselves to the present Society. In Scotland, the flourishing branch at Aberdeen has attracted numerous members, and there is reason to anticipate considerable accession of strength in other quarters. The branches have sprung up in divers ways; some have initiated themselves by pure local energy, others have required counsel and aid from the central executive, and there is in their management and in their relative activities, a curious absence of uniformity. It is, however, inevitable, but it may also arise from causes that are remediable. In illustration of my statement, I may mention that Mr. Hart has this year prepared a large map, so coloured as to show the area and boundaries of each branch, the places at which the meetings are held, the number of such meetings, the proportion of members to the medical population, and the rate of increase for some years. To those amongst you who are interested in studying the development of this Association, the map will be eminently suggestive. It will doubtless attract attention from the Council, and will introduce another argument in favour of a complete revision of our laws. At present these are by no means perfect, and although alterations and amendments are continually proposed inasmuch as these apply to special defects, they leave the group of original laws incomplete, if they do not render them inharmonious. Whenever this revision takes place—and it cannot be long delayed—sound judgment and forethought will be required to utilise the power which has been so rapidly developed, and to direct it into those channels in which it will operate for the advantage of professional interest and the public good. In the various discussions of the Medical Act which governs the relations between the profession and the public and the modes of examination for diplomas, the principle that representation should accompany taxation has been always accepted. Successive annual meetings have affirmed direct representation to be a *sine qud non*, and have reappointed the committee instructed to deal with this question. The firmness of the Association on this point has been justified by a declaration from the Minister who sacrificed one Bill in preference to the concession of it, that there is no longer any opposition to direct representation. The state of public business this session has deprived Mr. Headlam of the power to forward his Bill, and as time will thus be given to the medical corporations to reconsider the sources of their opposition, let us hope that on the next reading of the Bill their antagonism will have been withdrawn. The possessors of degrees obtained without examination, and dishonestly used, have received great discouragement from recent decisions given in our law courts. Such righteous judgments alike protect the public from unqualified adventurers and support the moral dignity of our profession. In no public measure is this Association more deeply interested than in the administration of the Public Health Act. The Royal Sanitary Commission, which inaugurated it, included the names of distinguished members of our body, and the "Committee on State Medicine" contributed its advice. The representations made failed to influence the Minister in charge of the Bill, and the consequence is that serious imperfections exist. Had Mr. Stansfeld consulted the eminent men who are employed in the medical department of the Privy Council, he would perhaps have been convinced that, to insure the efficient working of the Act, well devised areas of administration, efficient inspection, adequate powers, and thorough co-operation between the local boards were absolutely necessary. He would also have learned that men who had devoted themselves to the study of law and of military science, are scarcely likely to have drunk deeply at the fount of Hygiene, or to possess qualifications for superintending matters that are purely medical. In this instance, Mr. Stansfeld has not displayed the proverbial wisdom of the serpent, and even should he discard the influences which have hitherto guided him, and consult the highest sanitary authorities, the rectification of these defects must occupy a long period. Had Sir Charles Adderley's Public Health Bill and the Government Registration Act been proceeded with, amendments would have been prepared by our own Parliamentary Bills Committee that might have remedied existing errors. As neither of the measures reached the committee of the House of Commons, we have simply to mourn over good intentions unrealised. Our military brethren have laboured under a sense of injury from the new army warrant, owing to the abrogation by it of former privileges specially granted under former warrants, under which a large number of medical officers had previously entered the military service. This Association, feeling sympathy with the sufferers, has aided them by detailed statement of propositions in writing, through the Chairman of the Parliamentary Committee—Mr. Ernest Hart. The advocacy thus given has not been ineffective since Mr. Cardwell "has given careful thought to the representations, and has drawn up modifications of the warrant thereupon, which require the sanction of the Treasury." The language quoted implies concession, and we may hope that a just sense of the interest of the nation and of the service itself will prevent a parsimonious decision on the part of the Treasury. Niggardliness in this matter, which involves rank as well as money, will tend to render the service unpopular, to disappoint efficient officers, and to lower the standard of future applicants for admission into the army. It is gratifying to record that the efforts of our Association on this point have been highly appreciated by the army medical service, and that expressions of warm thanks have been received from the officers at military stations both at home and abroad. The Association is indebted to many members of Parliament for support. Especially are thanks due to Dr. Lyon Playfair, the Right Hon. T. E. Headlam, Mr. Dalrymple, and Mr. Charley, for the readiness with which they have assisted in bringing the views of the Association clearly before the House of Commons. At the earnest desire of your Finance Committee, the business affairs of your Association have been subjected to a thorough searching and independent investigation—a course strongly urged by my friends Mr. Husband, of York, and the late Mr. Clayton, of Birmingham. The accountant's report reveals a financial condition that is highly satisfactory and removes all doubt as to the soundness of the Association in a commercial sense. You will, in future, be supplied annually with an intelligible balance-sheet, in which the income of the year is contrasted with the expenses of the year. Gentlemen, permit me to refer to one subject which, though not directly connected with the objects of the present meeting, is yet an offshoot of that human sympathy and generosity which reaches its full tide on occasions like this. The cries of misfortune and poverty appeal too strongly to us all to need any recapitulation by me of the claims of the British Medical Benevolent Fund. Originating with some of the earliest members of this Association, it has steadily pursued its course of beneficence by bestowing donations on the needy to relieve temporary wants, and by supplying the aged and unfortunate members of our profession with small—too small—annuities. Its usefulness is limited by its means, but every contributor may feel that his donation benefits some deserving person, since the society has no paid officer except the collector. Before concluding, I must express my cordial thanks to the President of the Council, and to the members of the Council, and all the officers, local and general, for the courtesy and readiness with which they have aided me in my duties, and have thus rendered my year of office almost a sinecure. And now, gentlemen, let me congratulate you on your second assemblage in the

metropolis—the centre of medical literature and education in our country. The learned and eloquent addresses delivered here eleven years ago, under the presidency of Dr. Burrows, the hearty goodwill and the genial hospitality of our London brethren, must be fresh in the memory of many. Upon this occasion, when our meetings will be presided over by so eminent a surgeon as Sir Wm. Fergusson, a success commensurate with our increased number may be confidently predicted. Gentlemen, I move that Sir William Fergusson take the chair. [The President, Sir William Fergusson, then took the chair.]

Dr. CHADWICK said he was charged with a very pleasant duty, and before advancing to it he would venture to congratulate the chairman on the honour which he had received in his election to that position, and upon the splendid ovation which he had received. The resolution he had to propose was—"That the best thanks of this Association are due, and are hereby given, to Mr. Alfred Baker for the able, courteous, and hospitable way in which he has filled the office of president during the year ending August, 1873, and that he be, and he is hereafter, appointed a vice-president for life." He felt that they owed a debt of gratitude to the gentleman who had just vacated the chair, and was quite sure that they would most heartily adopt the resolution. Those gentlemen who remembered the success of the Birmingham meeting must know a great deal of that success was due to the excellent way in which their president fulfilled the duties of his office. He did not doubt that something of the success of the present year, as shown in the great augmentation of numbers, was due to the success of the Birmingham meeting, and if it was really true that the success of the annual meeting promoted the success of the following year, what might they not expect from the splendid gathering which they were now commencing. In after years Mr. Baker would look back upon this meeting and the year of his presidency with feelings of every kind of satisfaction, as being the bright turning point in their Association, from which it would go on to greater success and to promote those objects for the advancement of medical science and the good of the profession for which it was originally intended. He had great pleasure in moving the resolution.

Dr. HUSBAND said he rose with no small pleasure to second a vote of thanks to one who had so admirably and efficiently fulfilled the duties of President for the past year. As Sir William Fergusson, their present chairman, worthily represented the surgical celebrities of this great metropolis, so they in the provinces considered Mr. Baker a surgical representative of the body to which they peculiarly belonged; and not only did they consider him a fitting representative of their body, but they were proud that they had men amongst them who, when they were placed in public positions, could fill those positions so much to their own credit and to the benefit of the Societies of which they were temporarily the heads. They who remembered the great and important meeting which they held in Birmingham felt that a debt of gratitude was owing not only to Mr. Baker, but to those men so renowned in their locality who assisted him so ably on that occasion; and, with his friend Dr. Chadwick, he looked upon the Birmingham meeting as a fitting prelude to the great, he would almost say the crowning, one which was before them to-day. He claimed their thanks for Mr. Baker, not only on account of his public presence at their general meeting, but also because he had thrown himself heart and soul into the work of the Association; and in electing him a vice-president for life they were electing one who he hoped for many long years would give them the benefit of his aid and of his wide experience.

The resolution was carried by acclamation.

The PRESIDENT then proceeded to read his

INAUGURAL ADDRESS.

After expressing his high sense of the honour conferred upon him, Sir Wm. Fergusson went on to say:—"I imagine that few physicians or surgeons of the present day, who might be honoured with the post of your president, would venture upon such extensive ground as that taken up by many of those who gave presidential retrospects at early meetings of this kind. Doubtless 'there were giants in those days,' for they did their work well; but it may be claimed, on behalf of the like men of the present day, that the field of observation is now greatly extended, and that few can hold themselves as thorough masters in all departments. On looking to those who have to deliver special addresses on this occasion, and considering the characters of the gentlemen who will preside over our sections, I confess myself at a loss to determine what I shall say to you, or how I can in any way give interest to this inaugural address. I have a most pleasing recollection of the president's address last year. Mr. Baker left the ordinary beaten path, and, like some of his predecessors, adroitly seized on a subject which possessed, for the time, an interest even more exciting than ordinary professional subjects. The town of Birmingham and its surroundings, the topography of the district, its great factories, its deep mines, out of which so much of the wealth of England has been developed, were themes which proved most attractive, and every one present felt that he was listening to a story of England's greatness, described by one whose lifelong residence in the district, and whose talents and acquirements qualified him in a high degree for the duty he undertook. Conjecturing what I might say to you on this occasion, I naturally, from the local example of last year, thought what a subject I had before me were I to take London and its environs. With a history well nigh as old as our knowledge of the Island of Great Britain, with a progressive aggregation of humanity larger than the world has ever seen, there are materials for hundreds of addresses, although possibly none might be so appropriate to our senses as the subject selected by our last year's President; and it may be allowed that the valley of the Thames, however beautiful as regards its surface, or interesting as the largest and most populous in our island, lacks much of that special interest which engrosses the attention and occupies the labours of modern men in reference to the mineral products from underground. There is nothing in the London clay, nothing in the geology of the valley of the Thames, which can compare in interest with under surface matters in other parts of the country. There are, however, certain features connected with the valley of the Thames, which seem to me worthy of special attention; and naturally, among men educated as we have been, questions may fairly be raised as to the hygienic condition of the locality. I suppose there can be little doubt that those who planted London as a post or capital looked to the ground on which the Tower now stands as a good commanding position on the estuary of the Thames, and that little was thought then of the teeming millions of subsequent inhabitants who would populate the town and valley above. At that date there must have seemed a world of waters sufficient for all after years; the question of drainage would then be little thought of. In primitive times, springs, river sides, and shallow wells, were the chief immediate sources of water supply. As years rolled on, where population increased, these resources were found deficient, and additional ones, in a higher style of engineering, were required. For my own part, I am more impressed, regarding the civilization of the Romans, by what they have left indicative of their efforts to give supplies of water when required for health and comfort, than by any other features now extant. The great conduits which testify to the engineering skill of the time, as also to the expenditure incurred in regard to this necessity of life, and the remains of their baths, are ample proofs to this effect. To many it may seem strange that I should refer specially to such a subject on this occasion. It may be thought to pertain chiefly to water companies, engineers, and ratepayers, but in reality it pertains to the public at large, to public hygiene, and in the latter respect peculiarly to our profession; and for such reasons I know of no section of what is now often called State Medicine more interesting than that of water supply where men do congregate. It is right and fitting, in my opinion, that at a meeting such as this some special reference should be made to the subject. Next to the treatment of disease and accident, it seems to me to stand foremost in our professional minds, for water is as much a question of food as any other dietetic material that can be named. Our supplies of vegetables, of fish, of animal material, come possibly second in importance to this necessary of life. Mother Earth herself takes nourishment from her own direct produce—effete vegetation, from the decay of fish, and the *débris* of animal life; but all these would count for nothing if she were deprived of water nourishment. Rational physiology may be called the philosophy of life, and we, claiming physiology as one of the highest departments in our special profession, may claim, as the most skilled conservators of public health, that our opi-

nions regarding water supply should hold due influence over the public mind. We say we are a meeting of "The British Medical Association;" we might as well say that we are a hygienic congress of medical men; for all our efforts are towards the amelioration, the mitigation, the suppression of disease. It is to the honour of this and all other similar meetings that, almost every paper in our sections is devoted to such purposes. In law, man deals with what man has done or chooses to do. In diseases, we deal with causes and courses which I may say, in general terms, are far beyond the ken of man; we come in contact or into collision with nature in varied aspects and phases which the wise thinker in our profession would hardly venture to explain. It is at this point, perhaps, that our profession has from time to time broken down by attempting too much. Who among us knows what miasm is? What sense is there in the idea that it may be averted or obstructed by coverings, or nets, driven away by fires, or frightened off by artillery? Yet all such theories have obtained more or less favour in our profession, even in the nineteenth century. Who among us can positively, in reasonable terms define the physical condition of miasm as it once prevailed in the fens and swamps of Lincolnshire, or possibly even now lingers, if it does not dwell, in horrid perfection, on the banks of the Niger? Let us hope that our profession may in time be able to appreciate the palpable physical qualities of the great enemy in this shape. We have learnt empirically in time how to knock him on the head by force of quinine, but he is as impalpable to us now in these days of dengue, as in the time of Hippocrates . . . . . In many respects a "water question" is one of the most interesting in social life. It is as great now as when Moses struck the rock; water is an absolute necessary of life. Many of what are called comforts and luxuries might be absolutely dispensed with; but, without water, both vegetable and animal life would cease, and in a hygienic point of view we are professionally interested in such a question. Here, as in many other public and naticnal questions, there is great diversity of opinion. The sources of supply, the quantity, quality, and expenses thereof, form separate heads, of which various classes of the community take special notice. The quantity and quality are the features in which, perhaps, we are most interested. The public at large probably look upon the sources and expenses as the most important features; but even here we, as ordinary citizens, are as much interested as are our fellows. In regard to quantity and quality, all seem to agree that there should be the largest and best imaginable of both; no stinted time supply, but a continuous run of the finest. It seems, however, next to an impossibility to have such in this locality. The Thames cannot afford a sufficient supply unless his main stream were nearly run dry; nor does it seem possible, under the circumstances, to render the purity of that quantity such as should satisfy all. Filtering in great tanks on the river-side, in cisterns or vases in houses, scarcely seems to accomplish this; and I am here tempted to say, that possibly a fault lies on our side—that we expect too much for ourselves, and lead the public to expect too much, on the score of what may be considered quality and purity. Moreover, we differ largely among ourselves in regard to these points. As educated chemists, in reference to animal life and nourishment, we talk and write learnedly about elements. The purest water may be defined as that which holds least saline, animal, vegetable, or earthy material. The physician thinks so highly of this feature that in a fluid dose of medicine he orders the bulk of the potion of distilled water; yet in that water he probably congregates an amount of saline, animal or vegetable material, which no natural spring, or unpolluted stream, can be compared with. He sends his patients hundreds or thousands of miles to partake of waters where the converse of purity is generally the chief feature of the fluid. But this, it will be said, is in accordance with the science of combinations and a just appreciation of the efficacy of salines, especially those compounded by nature in the bowels of the earth. I do not object to these impregnated waters as curative agents in certain forms of disease; I do not quarrel with the physician when he orders distilled waters as the purest fluid for his compound,—but in either instance he cannot fancy that his patient is about to drink pure water,—it may be admitted that he has no such idea, yet the same man insists stoutly on the necessity for unexceptionally pure water for ordinary drinks. This "Adam's wine" may be filtered, boiled, distilled, yet certain so-called impurities will hold their place or speedily reappear. Vegetable matter, animal matter, earthy or saline matter, are the bugbear of those who want pure water for man. Supposing that the greatest chemist in the world places a pint of pure water, absolutely without alloy, at the meal of his fellow-man, be he poor or be he rich, let us, as medical men, do what the community at large cannot—trace this fluid until it is no longer palpable. Take as a type the pet of the day, the "working man;" allow him to be a model teetotaller, who has taken a vow against alcohol and all fermented liquors. He takes his frugal meal—say water and bread; trace that meal, as far as your physiological imagination can, down the intestinal canal and into the blood, and fancy from your knowledge the affluents thereon. Can "pure water" be recognised beyond the teeth in this downward course? Mucus, saliva, tonsillary secretions, mucus again, and gastric juice, and pancreatic, and biliary, all join the ingredients of the simple meal. But let us suppose that the working man indulges in the luxury of a bit of beef or mutton, with some of the usual adjuncts, potatoes, turnips, greens, cabbages, peas, or beans; what is the fate of the pint of pure water, which is deemed the grand feature of this excellent fare? Here vegetable and animal matter are joined with pure water to an extent a thousand times beyond the imagination of the pure water theorist, and the bread and water system is simplicity itself compared with this. I take a grade of society above that of the "working man;" go to "the upper ten thousand," where in reality pure water-drinkers abound, and consider what are the associations of the half-pint or pint of pure water, ere fluid can no longer be traced. Look even at the condition or risk of the epicure, whose means permit him to indulge in the high-flavoured grouse or daintily managed venison, and suppose him a "pure water" man; what becomes of the water as soon as it is swallowed? what about the pleasing adjuncts to these delicious articles of food, and what (to those who are always referring to salts in water) about the common salt which is consumed in quantities so palpably larger than those pointed out by the chemist in so-called saline waters? What can we, as medical men, say of the refinement in diet of the savage who prefers animal food in a putrid state to that recently killed, and uses such surface water, or any other kind, as chance may put in his way? . . . . . Never has this Association met under more favourable auspices. Through the generous liberality of the Council of King's College, you have at your disposal all the accommodation in respect of halls, meeting rooms, and lecture theatres, which is required. The Chief Magistrate of the City—the Lord Mayor of London—will grace us with the hospitalities of the Mansion House. The Royal College of Surgeons of England will give us a hearty greeting, and throw open its halls, libraries, and unequalled museums for our inspection. One of the most gratifying events of the occasion is the courtesy of the Benchers of Lincoln's Inn,—comprising many of the most distinguished lawyers of the day, including the Lord Chancellor of England,—in permitting the use of their splendid hall for our dinner festivity. Never, perhaps, has there been such a blending of Law and Physic before; a happy omen of our times. Her Majesty's great castle at Windsor, the episcopal palace of Lambeth, the mansions of many of our nobility and gentry, are thrown open to permit inspection of æsthetic collections, possibly not to be surpassed in the world. Our fourth evening's entertainment will spring from the generosity of the Council and Professors of University College, where, as professional men, we shall meet in harmony on the premises of one of the most distinguished and efficient of our modern Medical Schools. We have begun our work this morning holily, under the dome of St. Paul's; let us conduct it wisely, and thus fulfil the well chosen motto for King's College, within whose walls we are now met, "Sancte et sapienter."

The SECRETARY read the forty-first annual report and financial statement.

Dr. GRAILY HEWITT moved "That the report of the Council and the financial statement be received and entered on the minutes."

Mr. BAKER (of Derby) seconded the motion.

Mr. MARSHALL (of Dover) thought the financial statement which had appeared in the *Journal* required some comment. By the twenty-third bye-law the statement ought to be published within the first three months of the year. Why, then, had that law been set aside and the publication delayed until July? Under the head of contributions there appeared the large sum of £952 7s. He had taken some pains to ascertain what that item meant, and had come to the conclusion that it included the payments to gentlemen who contributed to the *Journal*. In a letter to the Editor of the *Journal* he had asked to be favoured with the names of those gentlemen and the amounts paid to each during the past year, but the answer was that the names were furnished to the Finance and Journal

Committee, but that he was not at liberty to give them to any other member of the Association. Was then the policy of the Association towards its members to be one of concealment? If certain things were to be known only to the Council, the Committee of Council, or to certain gentlemen who were to be let into the secret, and concealed from the other members, let it be publicly stated that such was the policy, and let the members approve or disapprove of it as they pleased; but he hoped that some member of the Council would give him the information he wished for. Another item, that of "petty cash, £541 6s.," also appeared rather large. He had endeavoured to ascertain from the general secretary what it was composed of, but had merely been informed that it was for postage of foreign journals, the wages of the office boys, and certain office stationery. Another item showed £280 for stationery, but he supposed that could not be for the same stationery as that included in the £541. He did not wish to be misunderstood in this matter. He referred to the items simply as a member of the Association, and was not connected with any medical journal. He merely desired that the expenditure might be fully canvassed by the meeting. He had been very much struck by an observation of Dr. Steele at Birmingham last year—that the Association appeared to be very much like a leaky cistern. As in the one case, the more water there was put in the faster it ran out; so in the other, the more money they obtained the faster it disappeared. Were they doing right in sinking the funds of the Association upon the *Journal*? Could they not do something better with it? Could they not form a benevolent fund for educating the orphans of medical men, or for relieving the unfortunate and distressed members of the profession? Had the money spent upon the *Journal* been usefully spent?

Mr. SHRIMPTON said the Association was only just emerging from the difficulties which had surrounded it. For the first time they had a surplus, and he did not think it advisable at once to launch out into any speculation whatever. Let them form a reserve fund for themselves before they thought of using their means for the benefit of others.

Sir CORDY BURROWS said it was merely a matter of courtesy to the Council to order the Report to be entered on the minutes. The motion could be agreed to, and the discussion might take place afterwards.

This suggestion was approved of, and the motion was agreed to.

In reply to a question by a Member,

The PRESIDENT said the Committee were desirous of doing all they could for the comfort and convenience of the members, but they knew of no room where all could dine together on Thursday. It was entirely a case of "first come first served." It was under consideration whether they could not have three dinners at different places.

Mr. SOUTHAM, in proposing certain alterations in the rules of the Association, said, in consequence of the increase in the number of members the Committee had felt that it was desirable that both the Committee of Council and the Council itself should be more extensive than it had hitherto been. Although the Council was a representative body, a very large number of members were not represented on it at all, because they did not belong to any particular branch. In Edinburgh, Glasgow, Dublin, and other towns in Scotland, Ireland, and even in England, there were gentlemen connected with the Association who were not within the district of any of the branches, and consequently these gentlemen were not represented on the Council. In order to remedy this state of things it was now proposed to elect as life members of the Council "All readers of addresses and presidents of sections." If this were agreed to it was estimated that an addition would be made to the Council of six or seven members each year, all of whom would be men of mark and distinction. The number would be so small, that there was no fear that these life members would ever exceed those who were selected by the branches. The next thing to be taken into consideration was the number of members in the Committee of Council. It had been felt for a long time that ten elected members of the Committee were too few, and it was now proposed to add ten more. It had also been thought advisable to make an alteration in the mode of election, so that in future the Council should nominate twenty persons, a list of whose names should be sent to each member of the Association at least three weeks before the annual meeting. In addition to these any member would be at liberty to nominate candidates. Then, in order to admit new blood into the Council, it was intended that five out of the twenty members should retire annually, the retirement being of those who had attended the least number of meetings. In conclusion he proposed the following alterations:—Rule 7. To omit the word "and" in the second line, and insert after "treasurer" the words "the readers of addresses and presidents of sections for the current and past years after 1872."—Rule 8. To omit the word "fortnight," and insert instead the words "five weeks;" also in the same rule, to insert the word "twenty" instead of "ten."—Rule 13. To insert the following new rule before Rule 13. "The Committee of Council shall consist of—1. The President, President-Elect, President of Council, Treasurer, the Vice-Presidents, and one Secretary from each branch; 2. Twenty members chosen annually by the Council. Of these, the five who shall have attended the fewest meetings of the Committee of Council in the preceding twelve months shall be ineligible for re-election for one year. In case of equality of attendances, the ineligibility shall be decided by lot.—*Mode of Election:* The Committee of Council shall nominate twenty persons. A list of these, together with a list of the new Council, shall be sent to each member thereof at least three weeks before the annual meeting. Any two members of the Council shall also have the power to nominate one or more persons, on giving notice to the General Secretary at least ten days before the annual meeting. A list of the nominated persons shall be sent to each member of the Council before the annual meeting; and the election shall take place at the first meeting of the new Council by voting papers containing a list of all the nominated persons."

Mr. BAKER seconded the proposal. The suggested alterations, he said, had received the very careful consideration of the Council, and although some fault might perhaps be found with certain parts of them, he considered that their virtues predominated over their defects.

Dr. EDWARDS CRISP considered that the proposal to add seven or eight members to the Council every year in the way proposed was particularly objectionable. He had watched the progress of the Association for many years, and had noticed that it was always governed by a clique in favour of the corporations. Now it might so happen that those gentlemen who delivered annual addresses might be connected with the corporations, and therefore he thought it most inadvisable to agree to the proposal now brought forward. A gentleman might be able to deliver a very excellent address, and yet his presence on the Council might be most hurtful. He therefore protested against the alteration suggested by the Council. Then the election of ten extra members by the Council itself was a very retrograde step.

The PRESIDENT: Nomination, not election.

Dr. CRISP: Nomination is election in such a case.

Mr. BAKER: Any member can at any time nominate a member for the Council.

Dr. WYNN WILLIAMS: Is this retrospective?

The PRESIDENT: No; it commences this year.

Dr. WYNN WILLIAMS said, the proposer of the alterations had expressed a wish to get new blood into the Council, but the alterations themselves were just calculated to keep in the old blood and prevent the introduction of new. He protested against the election of readers of addresses as members of Council for life. No step could be more retrograde in the management of the affairs of the Association.

Dr. GIBBON moved the omission from the resolution of the words, "Readers of addresses at the annual meetings." He strongly felt that the proposal before the meeting, if agreed to, would make the Council a very cumbrous one, and would by no means promote the prosperity of the Association. Already they had had an illustration of how individual members might be treated by the Council. Mr. Marshall of Dover had asked certain questions, but the Council had not deigned to reply to them. They were important and specific questions, and surely, if only as a matter of courtesy, they ought to have been answered.

Mr. MARSHALL, in explanation of his questions, said he understood that there were two accounts for stationery, and he merely wished to have the matter cleared up.

The SECRETARY said that he had told Mr. Marshall by letter that at present he was so engaged about the annual meeting that he could not give the particulars, but that he was quite ready to show him the books at any time.

Mr. HUSBAND said, not one of the Council would flinch from having the fullest exposure of the affairs of the Association; but he would ask any one who was connected with commercial affairs at all to say whether any undertaking could be agreed on if everything was published in the presence of the reporters? If, however, Mr. Marshall would take the pains to ascertain how the expenses were checked, he would see that

there could have been no waste of the funds of the Association. The Council were determined that every farthing that was spent should be spent in the interest of the Association. The Committee of Council had a Finance Committee; and in reply to the gentleman who had talked about "cliques," he appealed to those who knew the working of the Association whether it had ever been managed by a "clique" acting in conjunction with the medical corporations? He had been a member of the Council for thirty-five years, and during the whole of that time the Association had rather been in antagonism to than in co-operation with the corporations; and there had been a laudable attempt on the part of the Association and those with whom he had acted on the Committee of Council that there should be no *cliquism*, but that the interests of the Association should be paramount. He himself would not have remained one moment as a member of the Committee of Council if it had been in the hands of any clique or party whatever. An objection had been taken to the readers of addresses becoming members of Council. Let them consider that they delegated the power of the Association to the Committee of Council, which was the governing body of the Association; and in the election of the Committee the greatest care was required. The proposal with regard to the readers of addresses now was, to take men who, from their position, would be an honour to the Association and a credit to the profession, and get them to identify themselves with the Association more than ever before. They would not necessarily be London men, or connected with the corporations, but would be selected throughout the length and breadth of the land; and these would not be men to be at the beck and call of any clique whatever, but would be likely to do that which would be the best for the Association. By extending the basis of the Council in this way, he believed they would be doing a great good. He had frequently regretted that, until lately, the best men of London had not been connected with the Association; but the proposal now brought forward would, from time to time, introduce representative men of the profession, who must necessarily confer great benefit upon the Association. Some jealousy appeared to exist about the Committee of Council nominating their successors, or nominating themselves; but what had practically been the working of the old system? The Council came together; there was no list prepared; the members went round to their friends canvassing, and complete confusion took place. The result was, that some of the best men who had done the work at great expense and sacrifice of time to themselves, had been left out by the mere chapter of accidents, and others had been elected who had never put in an appearance at all. It was necessary that the meeting should have a list before it, and the proposal now was that the Committee of Council should prepare a list, and if anybody could suggest a better mode, the Council would be quite willing to adopt it.

Dr. WEBSTER (of Dulwich) said he had had every confidence in the late and several previous Councils, and believed they had done their very best for the Association. He looked upon the present Council as much too large, but the appointment of readers of addresses would make it still larger.

Sir CORDY BURROWS and Dr. WYNN WILLIAMS both expressed their desire to second the amendment for omitting the readers of addresses from the resolution.

On a show of hands being taken, forty-six were held up in favour of the amendment, and fifty-nine against it.

Dr. CRISP expressed an opinion that the members of the Council, were hardly justified in voting on such a question. He did not think it decent that they should thus decide a question relating to the constitution of the Council.

Mr. DESMOND protested against what he termed "the ungenerous remark" made by Dr. Crisp.

Dr. WEBSTER.—I understood that the readers were to be on the Committee of Council—is that so or not?

Mr. BAKER.—No; on the Council.

Dr. WEBSTER.—I think it is of very little importance whether they are upon the Council or not.

The alterations in the laws were then agreed to.

Mr. R. H. B. NICHOLSON (of Hull) proposed the omission of Law 23, viz.: "The Committee of Council shall annually prepare a statement of accounts up to the last day of each year, and a report upon the financial condition of the Association, which shall be published in the *Journal* within the first four months of the year. The accounts shall be previously audited every year by two auditors, appointed at the preceding annual meeting, and not holding any other office in the general Association." And that the following new Law be substituted for it:—"The Committee of Council shall annually appoint a public accountant to audit the accounts up to the 31st day of December of each year, and such account shall include a statement of assets and liabilities, and a report upon the financial condition of the Association, which shall be published in the *Journal* within the first three months of the year." He stated that the Council had unanimously supported this resolution.

Dr. FAULKNER (Treasurer of the Association) seconded the motion, which was unanimously agreed to.

Dr. STEELE proposed "That the Committee of Council be requested to draw up a complete code of laws and bye-laws for the government of the Association, based on the existing laws, with such suggested alterations and additions as may appear desirable, and to submit the same for consideration to the next general or annual meeting of the Association." The fact that the Association did not at present possess a satisfactory code of laws, was shown, he said, by the proceedings at the various annual meetings, when new laws were continually proposed; and in the discharge of the important duties of the large branch which he represented, he had been greatly inconvenienced in consequence of this patchwork legislation. Only recently when endeavouring to obey the laws which were accessible to him in the printed copy, he was suddenly called to order for violating some bye-law which existed somewhere, but which no one could find. He did not consider that the business of the Association and its management were as yet in a satisfactory condition, and the object of his proposal was to bring about a better state of things. The Committee might appoint a Sub-Committee and call in the assistance of their legal advisers, and draw up a set of rules which would set at rest the terrible discussions which took place every year about the constitution of the Committee and Council.

Dr. ROYLE (of Manchester) seconded the resolution, which was agreed to *nem. con.*

The reappointment of Mr. F. Fowke as General Secretary was proposed by Mr. AVERLAND, seconded by Mr. HEXTALL SMITH, and agreed to, and the meeting adjourned.

Reception at the Mansion House.

In the evening, the Right Honourable the Lord Mayor received the members of the Association at the Mansion House, and entertained them with all that profuse hospitality for which the mayoralty of Sir Sydney Waterlow has become proverbial. The reception was very fully attended, and at one time there could not have been much less than two thousand persons present. The entertainments provided were of the most varied character. The Egyptian Hall was arranged as a concert-room, and a most excellent selection of vocal music was performed under the direction of Sir Julius Benedict. Various philosophical instruments were arranged in the different drawing-rooms, and the optical and electrical apparatus attracted a large share of attention, as did also a display of the civic plate and a collection of civic antiquities from the City Library. Light refreshments were served upstairs, and late in the evening the band of the Coldstream Guards discoursed some very pretty and lively music. It was near midnight before the guests took their departure.

SECOND DAY—WEDNESDAY, AUGUST 6TH.

The public proceedings of the day commenced with the second General Meeting of the Association, when Dr. Parkes delivered his excellent address in Medicine, of which we give a verbatim report.

Mr. FOWKE, the general secretary, brought up a report from a numerously attended meeting of the Council held this morning, at which it was resolved that it be recommended to the general meeting that the annual meeting of 1874 be held at Norwich, and that Dr. Copeman be appointed the President elect.

Dr. FALCONER proposed that the recommendation of the Council be adopted.

Dr. SIBSON seconded the resolution, which was unanimously agreed to.

Dr. COPEMAN, who was received with cheers, said: I beg to thank you for having accepted the invitation that you have received from Norwich, and also for the honour you have done me in electing me your President. It seems to me a most serious matter to follow such a meeting as this. Of course, anything like competition is out of the question. We do not offer any competition with London, except in one instance. We have a splendid old hall in Norwich, which will dine, if need be, a thousand people. If you should be kind enough to pay us a visit, we will do the best we can to make it an interesting meeting for you.

The PRESIDENT said since they met last evening in the Mansion House, he had received a note from Lady Burdett Coutts, who was present on that occasion, intimating that she would be happy to throw open the grounds of her mansion at Highgate to the members of the Association.

CONFERENCE OF MILITIA SURGEONS.

A meeting of Militia Surgeons was held on Wednesday afternoon, at King's College, for the purpose of considering their present position in reference to the depôts lately established, and to revive the old Militia Surgeons' Society. The chair was taken by Mr. Borlase Childs, the last President of the Society.

The CHAIRMAN said they had met for the purpose of considering the grievances as affecting militia surgeons, which had arisen, or might arise, in consequence of the working out of the new Army Organisation Bill, and the establishment of central depôts. Certain hard cases of great grievance had come under his notice, where men had suffered severely, and were likely to suffer still more. He knew of one case where a gentleman in a provincial regiment had lost at least £200 of his income in consequence of the establishment of a central depôt. He was deeply interested in the welfare of his provincial brethren, and should have much pleasure in doing anything he could to bring their case fairly and properly under the notice of the regular authorities, as from his residence in London he had probably more opportunities of doing so than gentlemen resident in the country. He invited a discussion on the question, and also the adoption of such resolutions as might be conducive to the welfare of militia surgeons in general.

Mr. SMITH, of the East Norfolk Militia, said he wished to explain why he had taken an active part in summoning the present meeting. Twelve months ago, at a meeting of the Association at Birmingham, a meeting was held, at which it was determined that a general meeting should be summoned in London at the earliest possible opportunity. No summons had at present been issued, and seeing in the gazette of the Association that there was a conference of Poor-law Medical Officers to be held, and a hint being thrown out that it would be a good opportunity for militia surgeons and other bodies to assemble, he corresponded with Mr. Hart, and at his suggestion issued circulars. He also wrote to Dr. Stokes, of Dublin, asking him to move in the matter. The letters that were received in reply to the circulars contained but one sentiment—namely, that it was most desirable that they should know their present position, and the writers fully acquiesced in the necessity of the re-establishment of the old Association.

Dr. M'CORMACK, of Dublin, said he looked round on that meeting with feelings of deep regret when he saw so few faces to be recognised, and so few who recognised him. There was a time when he believed he was as well known as St. Paul's Cathedral, when he was called the great militia agitator; and though not gifted with prophecy, he did on more than one occasion state that the day would come when the militia surgeons of the United Kingdom would deeply deplore allowing that Society, then in a flourishing condition, and able to command the largest support in the House of Commons and the House of Lords of any society, to fall to the ground. He did not wish to cast any reflection upon the individuals or the nationalities that caused the Society to cease to be in that flourishing condition; but he was amused last year in reading the account of the proceedings of a meeting of militia surgeons in Birmingham, to see that the Irish surgeons took credit to themselves for starting a Society which they called the Militia Surgeons of Ireland, and invited the co-operation of their English brethren. It should have been the other way. The Irish members were the first to leave the old Association in the lurch, the Scotch members followed suit, and in a short time English members did the same. Union was strength, and without union they could not expect their claims to receive any support either from the Government or the House of Commons. Their wisest course was, therefore, to resolve that the Society of Militia Surgeons of Great Britain and Ireland be revived from that hour. Speaking as an individual, he believed they could not have a worse advocate than himself, or one more unfitted to bring forward the grievances of militia surgeons before Her Majesty's Government, inasmuch as he personally was not a sufferer. Selfishness, however, was one of the causes which led to the disruption of the Society some years ago, when men declined to contribute their small quota of half a sovereign annually to keep up the Society, because they were not at that time affected, forgetting that the day might come, as it had come, when they might be so affected. He believed it to be their bounden duty, whether their own pockets were touched or not, to make a common cause for their brethren who did suffer. He had not been with his regiment for some years, and were he to occupy the position of spokesman to address Mr. Cardwell or any of Her Majesty's ministers, and to urge a claim for compensation, he was afraid their case would stand on a very bad basis, because the first question put to him would be, "What have you suffered?" Although he had suffered nothing, he should still suffer a prospective loss, for if at any time, from a desire to cease active occupations, he retired into quiet life in the country, still, as long as he was the surgeon of his regiment, he had a prospective right to go back to that regiment, and, therefore, if no compensation was given, he should lose that right, whatever it might be worth. Mr. Cardwell had given the militia surgeons some hope or some idea that he would receive their grievances and redress them individually. The militia surgeons could not be guilty of a more fatal mistake than to allow Mr. Cardwell to deal with each case individually. Napoleon always made it a point to beat armies in detail, and if an individual case was put forward and turned out a weak one, Mr. Cardwell would of course claim it as a precedent why he should do nothing at all. Whatever representations were made to the Government should be made on the broad basis of their having done away with the life appointment of militia surgeons, who were appointed some twenty-five, some thirty years ago, on a full understanding and belief that the appointment was for life and during good conduct, and that the appointment did produce certain pecuniary advantages. They must impress upon the Government that by the common law of the land they had a perfect ground to demand compensation for loss of office. The common law stated that no man should be deprived of any appointment which he held under Act of Parliament without compensation. Militia surgeons had been all appointed under an Act of Parliament. Appointments in the Civil Service, in the Poor-law Department, or in Somerset House might be done away with without compensation, but he knew of no instance in which they had not been compensated, although it could not be demanded as a right; but the militia surgeons, by the statute law of the country, could demand from the Government compensation for loss of office, because they were appointed by the Act of Parliament creating the militia. That was a very important point to impress upon Mr. Cardwell. Under these circumstances he had great pleasure in proposing a resolution to this effect:—"That it is the opinion of this meeting that the Militia Surgeons' Society, under the old title of Militia Surgeons' Society of Great Britain and Ireland, be revived from this day." When that resolution was agreed to, then would be the time for taking another step, and making the Society useful and advantageous for the interests of militia surgeons by appointing a president, vice-president, secretary, treasurer, and committee. The Society would then be revivified, and he hoped that, remembering the evil effects of allowing it once to drop, it would not be allowed to languish until they had obtained that which he believed they would obtain; if they would work together they might bring before Mr. Cardwell such a weight of evidence that he would be bound to attend to it. He also recommended that pressure should be brought to bear upon candidates at the next general election with reference to this question.

Mr. PECKHAM, of the Mid-Kent Militia, seconded the proposition, which he thought a most desirable one. It was a great misfortune when the old Society dropped to the ground. Another great misfortune was that they never could get militia surgeons to hang together; they seemed perfectly apathetic in the matter, and would not trouble themselves to attend any meetings that might be called on the subject. If anyone could propose a plan by which militia surgeons would become a more united body, great good would be done. He felt convinced from Mr. Cardwell's remarks that he was prepared to do something, and therefore he was quite satisfied that good must result if the matter was taken

up vigorously by those who were so greatly interested in it.

Dr. WILLIAMS, of the Royal Flint Militia, said that he was appointed to his regiment in 1852. They were then only allowed 11s. 4d. a day, and 2s. forage money. By a little agitation they managed to get something more. They might depend upon it that, without agitation, they would get nothing, and although some of their brother surgeons thought they were doing wrong, he could not, for the life of him, see that they could be doing wrong by asking for compensation to which they had a perfect right. He deplored the want of unity existing amongst militia officers. A meeting was called in Birmingham at which only four or five gentlemen attended. He had come all the way from the country to attend this meeting, and he hoped, by a joint pressure upon their members, and by their united action, they might gain some redress.

Mr. SMITH, in answer to a question as to what Mr. Cardwell was prepared to do, said that if the depôt system was carried out the militia surgeon would lose his attendance upon the staff, he would lose his examinations of the recruits, and he would lose the two months' preliminary drill. They might keep their commission, and go out for a month in the year, and spend more money than they earned in the month. That would be the state of affairs.

Dr. WARWICK (of the 1st Royal Surrey) said he could not altogether agree with the remarks that had fallen from Dr. M'Cormack, as to the reason why many militia surgeons left the old Society. For his own part he never did join the Society, and many others did not either, and for this reason, that it was agitated at the time that the militia surgeon should be attached to the staff like the adjutant or the quartermaster. He had served about twenty years, and they must remember that at that time many of the surgeons appointed to regiments were men who held important positions in the towns in which they lived, and it was a rule laid down by the Secretary of State for War that the surgeon of a regiment should live at head-quarters. That rule was a matter which influenced many men, and it was a strong point when they came to apply for compensation. Surgeons remained in those towns for years, and did not accept other practices, because they felt that they, as had been the rule with all servants of the crown, would hold their appointments for life, and, moreover, that they could not be deprived of them without compensation. They accepted their appointments upon the footing of what had always been the law of the land, that as long as they did their duty they would retain them. Still they must look at the other side of the question. Changes would occur, and it was sometimes necessary for the good of the service that individuals should suffer. Such had been the case with regard to the abolition of purchase, which, no doubt, pressed hard upon individuals. Through the kindness of Mr. Peek, the member for Mid-Surrey, he forwarded a letter to Mr. Cardwell, stating very much what had fallen from Mr. Smith; for, as far as he could remember, he had never seen their case concisely stated in any medical or military journal. The way to put it was simply from a pounds, shillings, and pence point of view, because they accepted their appointments as an addition to their practice, just in the same way as they should an appointment to a prison, or any other public establishment. They received various sums. In his own case it was about £230 or £240 a year. That income was made up in the following way,—from attendance on the staff, from recruiting, and also from the training. It seemed that when the depôt centres were formed, they would lose the whole of the attendance on the staff, because a staff surgeon would be appointed at each depôt. They would also lose the whole of the recruiting both for the line and for the militia; and all they would be paid would be simply for one month's training,—not a penny for the preliminary drill. They all knew what a month's training came to, and what the cost was. Independently of that, they had to leave their own practice and to find a substitute during the time of their absence. Was it then worth their while to hold an appointment of that kind, and if it were offered to any man of standing, would he accept it? The case of volunteer surgeons was very different. They never expected to make it anything but a matter of pleasure. It was the same with the assistant-surgeons. They knew very well that all they would receive would be their month's training, with the prospect, of course, of promotion. One thing which had not been mentioned was this, that they could not all expect to receive the same rate of compensation.

The CHAIRMAN asked Dr. Warwick if he would kindly confine his observations to the resolution which was before the meeting. He thought it would be better if the resolution were first agreed to, and then Dr. Warwick might continue his remarks with reference to a subsequent motion.

The resolution was unanimously agreed to.

Dr. WILLIAMS then moved, "That this Society now proceed to elect a president, vice-president, secretary, treasurer, and committee, of not less than twelve, selected in proportion from each county."

Dr. WARWICK seconded the resolution. He only wished to add one further remark. Dr. M'Cormack said he thought it would be wise for them all to stick together. He quite agreed in that, but it must not be expected, if they received compensation, that they would all be dealt with in the same manner. It would depend upon the amount they had received from their regiments, and the time they had served in the regiments; and his own impression was that surgeons who had served less than fifteen years would receive but small compensation. That was only an opinion of his own, nothing more. He quite agreed with the resolution that they should have a small, working committee, and as he resided near London he should be happy to render any assistance in his power. He added that he had received a letter from Sir Henry Storks:—"The Secretary of State has stated in the House of Commons that the case of militia surgeons will be considered each on its own merits. Further than this, nothing at present can be said."

Dr. WILLIAMS.—That is just about the same answer he has given to everybody.

The resolution was agreed to.

It was then resolved that Mr. Smith, of the East Norfolk Militia, be the first President of the new Society; Dr. Williams, of the Flintshire Militia, be the first Vice-President; and that a Secretary and Treasurer be appointed. It was further resolved that Dr. Goodchild be requested to act as Secretary and Treasurer.

A committee was appointed, consisting of the President, Vice-President, Secretary, Mr. Childs, Mr. Heathcote, Mr. H. Muscroft (1st West York), Mr. Morris (Herefordshire), Dr. Warwick (1st Royal Surrey), Mr. Peckham (West Kent), Mr. Curtis (East Kent), Dr. Roche (West Essex), Dr. Stokes (Dublin County), Dr. Gossan (Antrim Rifles), the Surgeon of the South Cork Regiment, and Mr. Nagle (Roscommon).

On the motion of Mr. SMITH, it was resolved that the Society should ask the co-operation and assistance of the Parliamentary Committee of the British Medical Association.

The subscription to the Society was fixed at half a guinea per annum, and the proceedings were brought to a close by a vote of thanks to the Chairman.

At half-past twelve the first meetings of the sections were held, but for the present we must content ourselves with merely chronicling the fact, and must defer till next week the publication of some of the more interesting papers. The sections were six in number—viz.:—

SECTION A (Medicine).—President: Dr. Sibson. Vice-Presidents: Dr. Habershon and Dr. Eason Wilkinson. Secretaries: Dr. John Murray and Dr. Alexander Silver.

SECTION B (Surgery).—President: John Hilton, Esq. Vice-Presidents: Mr. Savory and Dr. George Buchanan. Secretaries: Mr. Henry Arnott and Dr. Alexander Ogston.

SECTION C (Obstetric Medicine).—President: Dr. Braxton Hicks. Vice-Presidents: Dr. G. H. Kidd and Dr. Leishmann. Secretaries: Dr. Aveling and Mr. A. B. Steele.

SECTION D (Public Medicine).—President: Dr. Lyon Playfair. Vice-Presidents: Mr. G. W. Hastings and Mr. T. J. Dyke. Secretaries: Dr. Corfield and Dr. Baylis.

SECTION E (Psychology).—President: Dr. H. Tuke. Vice-Presidents: Dr. Radcliffe and Dr. Thurnam. Secretaries: Dr. Blandford and Dr. S. W. D. Williams.

SECTION F (Physiology).—President: Professor Humphry. Vice-Presidents: Dr. Rutherford and Dr. Ransom. Secretaries: Dr. Ord and Dr. M'Kendrick.

From one to half-past two o'clock on this and the two subsequent days a public luncheon was served, by invitation of the metropolitan members, in a room adjoining the great hall. The luncheon-room was, we need hardly say, intensely crowded, and some complaints were audible anent the small number of waiters provided. The Reception Committee have come in for a good share of abuse during the week, and members who had forgotten the necessity of signifying their intention of being present at the meeting seemed to think it a hardship that some fifteen hundred persons could not be accommodated in the space and by the means provided for the entertainment of scarcely half that number. The country members have, there can be no doubt mainly to thank themselves for the various inconveniences to which they have been subjected, but we cannot altogether exonerate the committee for not foreseeing that the attractions of the London meeting were likely to draw together an unusual crowd of members.

In the evening the President, the Vice-Presidents, and the Council of the Royal College of Surgeons entertained the members of the Association at a most brilliant *soirée* in Lincoln's-inn-fields. The guests were received in the Library, the walls of which were decorated by a number of very beautiful paintings lent by some of the London fellows and other friends of the College. The amusements consisted of those which seem inseparable from gatherings of this kind, and in addition the guests had an opportunity of leisurely inspecting the Hunterian Museum and its marvellous contents—a rare treat, and one which was fully appreciated by the numerous foreigners who have honoured the Association with their presence. Refreshments in great plenty were served in the lecture theatre. The attendance was very large indeed.

THIRD DAY—THURSDAY, AUGUST 7TH.

At 10 A.M. the third General Meeting was held, and the reports of the various committees were received.

At 11 o'clock the Address in Surgery was delivered by John Wood, Esq., F.R.S., Professor of Surgery in King's College, London, which we publish *in extenso*.

The Museum.

The sixth annual museum, or rather exhibition of objects of interest connected with medicine, was arranged in some of the upper rooms at King's College, and reflected great credit upon those upon whom its organisation had devolved. The objects shown were of the most varied kinds, but the separation and classification of them were very perfect, and the visitors had no difficulty, with the help of the excellent catalogue prepared by Mr. Waren Tay, in finding any department which had particular interest for them.

The Pathological Department was the largest and most perfect, and embraced—(1) pathological specimens and microscopic sections; (2) drawings, diagrams, and photographs representing disease; and (3) casts or models. Among the pathological specimens were many of great clinical and historic interest, and one was enabled to follow in many cases, by means of photograph, specimen, and microscopic section, the complete history of cases which during the past year have excited more than ordinary interest. The notes in the catalogue were in many cases most lucid, instructive, and complete, and served the purpose of linking together, as it were, the series of specimens. This compact way of bringing cases under the eye is most instructive, and proved very attractive, especially to those visitors from the country who may not have had an opportunity, such as metropolitan members enjoy at the various societies, of seeing and hearing that which may have interested them to read of in the journals.

The preparations which are deserving a prominent place are those (mainly supplied from the museum of Guy's Hospital) which illustrate the natural history of Bright's disease, Hodgkin's disease, and Addison's disease. Among the morbid specimens were the six original preparations described by Dr. Bright illustrating his "white mottled kidney." A large series of supra-renal capsules, together with many excellent drawings of patients suffering from morbus Addisonii, and the models, drawings, microscopic drawings, and preparations illustrative of lymphadenoma, served to give one a remarkably comprehensive bird's-eye view, as it were, of these two diseases. The objects lent from Guy's Hospital reflected great credit upon the school, and should serve as a model for the recording of cases.

Among anatomical and physiological preparations were to be found the beautiful dissections of the nerves of the uterus by Dr. Snow Beck, and a very interesting series of humeri, lent by Professor Struthers of Aberdeen, showing the supra-condyloid foramen as it exists normally in some of the lower animals, and as an abnormal condition in man. Nor must we omit to mention the beautiful set of "Pathologico-histological" preparations by Dr. Otto Barth of Leipsic, exhibited by Messrs. Williams and Norgate. The specimens consisted of admirably cut sections, large enough to show structure with the naked eye, but admitting also of microscopic examination. A portion of healthy tissue is included when possible, for the sake of comparison with the diseased tissue, and it is stated that such specimens are found to be of great use in Germany for teaching purposes. Amongst pathological drawings we must mention those of Dr. Moxon, whose skill as an artist is well known; the drawings of patients with various morbid growths, exhibited by Mr. Birkett, drawings equalling in artistic skill those of Sir Charles Bell or Sir Robert Carswell, but by whom executed we could not learn; and the interesting series exhibited by Mr. Fairlie Clarke representing various morbid conditions of the tongue.

The specimens illustrative of diseases of the eye and ear were singularly numerous, and some of them singularly instructive. Mr. Hutchinson, whose energy in arranging the museum is acknowledged by all his colleagues, exhibited many very excellent drawings of morbid conditions of the retina and choroid, but the most interesting perhaps was a series of four drawings made by Dr. Gowers, showing the different stages of cases of optic neuritis. The drawings were excellent, and the instruction thus conveyed undeniable. Many beautiful wax models, lent from the museum of Guy's Hospital, illustrative of diseases of the skin, elicited admiration from all who saw them, as did also a series of plaster casts, contributed by Dr. Dyce Duckworth. These casts were made of ordinary plaster of Paris, and were beautifully and artistically coloured by (we believe) the librarian of St. Bartholomew's Hospital. Plaster casts are, of course, much cheaper and more durable than wax models, and when coloured as truthfully as were those of Dr. Duckworth's, convey an almost equal idea of the disease represented. Professor Gordon's (of Belfast) interesting selection of fractured bones attracted considerable attention. Dr. Boddaert, of Ghent, exhibited some very beautiful photographs of large nerve-cells and fibres; and Mr. Gutteridge, of Birmingham, a "stock" of calculi extracted by himself.

Amongst the instruments was to be found a very complete collection of forceps and other obstetric apparatus lent by Dr. Priestley and the Obstetrical Society of London.

Very numerous pharmaceutical preparations were exhibited by the leading druggists of London and the provinces, and the chief metropolitan surgical instrument makers sent a large assortment of novelties. Messrs. Renshaw, Lewis, and other publishers also had "on show" many of their more recent publications.

TYPHUS IN LONDON.

LONDON, happily, enjoys, as a rule, comparative exemption from typhus fever, and its prevalence in some parts of the metropolis, in the midst of a period of unprecedented prosperity, and in the middle of summer, is worthy of note. We are indebted to the kindness of Dr. McKellar, of the Stockwell Fever Hospital, and of Dr. Collie, of the Homerton Fever Hospital, for particulars of interest on this important subject.

The statistics of the Stockwell Fever Hospital for the three weeks ending the 17th July show that during these three weeks 20 cases were admitted—namely, 13 of typhus, 2 of enteric fever, 1 of scarlet fever, and 1 each of erysipelas, suppression of urine, pneumonia, and febricula. Sixteen parishes and unions go to make up the district covered by this hospital. Of these sixteen, St. Olave's Union alone has sent 10 of the 13 cases of typhus. Clearly, then, the alleged increase of typhus in this district is very localised.

The previous statistics of the four weeks ending on the 26th June show that 27 cases were admitted during these four weeks, of which 11 were typhus, and 7 of the 11 were from St. Olave's Union. "Typhus," in the language of these hospitals, of course means typhus; typhoid cases being properly characterised as enteric fever, to avoid all confusion. Typhus has existed in that neighbourhood for some little time: 12 cases were admitted therefrom during the four weeks ending May 1st.

At Homerton Fever Hospital as many typhus cases have been admitted in the eight months since October as in the previous twelve months. The following are the particulars. From the 2nd October, 1872, to June 24th, 1873, 224 cases of fever were admitted: namely, simple continued fever, 36 cases; scarlet fever, 45; enteric fever, 69; typhus fever, 74 cases. About the end of April last typhus appeared in the parish of Whitechapel in the neighbourhood of the mint—namely, in Cartwright-street, Royal Mint-street, Cooper's-court, Hay's-court, Kettleby-court, &c. From that time to the 13th June there were received about 50 cases of typhus, the subjects all natives of Ireland or born of Irish parents. From the 13th to the 25th of June there were no admissions of typhus from Whitechapel, but from June 25th to July 29th 6 cases were received. The number of cases in the hospital at the last-mentioned date was 57: namely, scarlet fever, 8; typhus, 23; enteric, 26. Of course a few cases not of specific fever have been admitted.

Clearly there is nothing like an epidemic of typhus. And it is to be hoped that before winter, which is its favourite season, involving the overcrowding and the underfeeding of the poor, the medical officers of health for the districts in which these typhus nests exist will be able to give us a satisfactory account of its disappearance. We cannot help, however, expressing a fear that such nests of typhus indicate an overcrowding in this metropolis which may become very serious if a wise legislation does not take it more into consideration.

THE CHOLERA.

CHOLERA has broken out in Ibralia. Up to July 21st, 29 deaths have occurred, nearly all in the lower orders. There were 33 deaths in Galatz in the week ending July 22nd. According to official publications, cholera has also appeared at Ismail and Cabul. In Buda-Pesth the cases for the week ending the 22nd were 315, and the deaths 150. The numbers the previous week were 100 and 80 respectively. In the week ending the 29th, the numbers were 358 and 160. The disease appears to be gaining ground.

It appears from a statement made by the town council of the City of Dresden that since the middle of May there have been 21 cases of cholera, and of these cases 8 had a fatal termination, and that 15 of the cases were imported ones. Since July 17th there has not been a fresh case.

Cholera is stated to have broken out in Bosnia, 25 cases having occurred, of which 8 were fatal. It is reported that cases of cholera have occurred in Hamburg, though the disease has appeared only in some low-lying part where sanitary arrangements are bad. The town itself is, we believe, free.

Vessels arriving in Danish ports from Konigsberg are compelled to be inspected before communication with the shore is allowed. A penalty is imposed for breach of this regulation.

Up to the end of last week, the cases of cholera in Konigsberg appear to have been 46, and the deaths 29; but it does not seem to be on the increase.

The Peninsular and Oriental steamers arriving at Alexandria from Venice are now subjected to quarantine.

The Lisbon Government has declared the Black Sea ports of Turkey suspected of cholera, and also the ports of the Austro-Hungarian Empire. The same Government has likewise declared the cities of Memphis and Nashville, in the United States, and the port of Venice, infected with cholera, and the ports of the Mississippi suspected. It likewise declares the Baltic ports of Sweden, Denmark, and Russia free from the disease.

Two cases have occurred among the troops in Trieste, one proving fatal.

There have been 20 cases and 12 deaths in Helsingborg.

The following is, according to the *Vienna Gazette*, a statement of the cholera cases in that city:—On July 17th, 9; on the 18th, 8; on the 19th, 10; on the 20th, 6; on the 21st, 10.

Cholera has appeared in Hungary.

Quarantine is imposed at Copenhagen on all arrivals from Helsingborg, which is only a few miles from the Danish coast. The Danish sanitary authorities have appointed officers to visit the houses of the poor, and ensure the removal of nuisances.

All arrivals in Spanish ports from the Austrian ports of the Danube and from the Vistula which had put to sea at a date subsequent to July 1st last will be sent to a lazaret for quarantine purposes.

The following are the particulars of cholera in Parma: July 24th to 27th, 17 cases, 10 deaths; on the 28th, 2 cases; on the 29th, 3 cases, 3 deaths; on the 30th, 3 cases, 2 deaths.

The disease, though advancing slowly in Italy, is said to be of a mild type.

A fatal case of cholera is reported to have occurred on board a British ship at Rouen. It is also reported that other cases have occurred in the vicinity of Rouen.

It appears that the first case of cholera at Helsingborg occurred on July 23rd, and that since then the disease has continued to spread, the deaths being about 50 per cent. Choleraic diarrhœa is reported as being very prevalent among the lower classes.

A hospital ship has been moored at Warholm, about twenty miles below Stockholm.

Correspondence.

"Audi alteram partem."

NAVY SURGEONS.

To the Editor of THE LANCET.

SIR,—On Wednesday, July 30th, I put the following questions in the House to the First Lord of the Admiralty:—(1) Whether at present assistant-surgeons in the Royal Navy, even when not serving on foreign stations, are denied the privilege known to be generally accorded to assistant-surgeons in the army, and to officers generally, of voluntarily retiring from the service; (2) Whether there is any limit of time to the refusal of the Admiralty to permit such naval medical officers to retire, or whether they are liable to be forced to remain in the service for any number of years at the pleasure of the Admiralty; and (3) Whether there are not at present navy medical officers on the half-pay list whose services could be had to supply the places of assistant-surgeons desiring to retire, but refused permission.

To these questions I received the following reply:—"That the right to refuse permission exists, no doubt, without limit as to time, but the practice is to permit navy surgeons to retire after they have seen service, and proved themselves deserving of the indulgence." To this was afterwards added, "That there were surgeons, but not many, on the half-pay list, available for duty."

I followed this up by putting on the Order-book of the House for Monday (August 4th) the following notice of motion:—To call the attention of the House to the present position of surgeons and assistant-surgeons in Her Majesty's Royal Navy in regard to voluntary resignation of their commissions, and the probable effects on the service. When it came on the forms of the House interfered to prevent it, and several notices in similar form on other subjects, from being brought on.

I think it is important that candidates for the Navy Medical Service should, without delay, and especially on the approach of competitive examinations, know accurately how they will stand when accepting commissions; and, therefore, I lose no time in making them acquainted with the particulars. It would be too long to allow matters to remain in doubt until the next meeting of Parliament in February, 1874.

The present state of the Naval Medical Service is this,

that "if navy surgeons have not seen active service, and proved themselves deserving of the indulgence, they will not be allowed to retire for one year, or ten years, or it may be for life." When a combatant officer or a surgeon in the Indian or British army asks to retire, this condition is never imposed on him—that he is not to be allowed to retire until he has seen service, and until he has proved himself worthy of the indulgence. On the contrary, and very properly, if he shows disinclination for duty, it is allowed him to retire without delay. No one ever heard of such a reply being given to an officer in the Horse Guards, or in any regiment of the line, or to a military surgeon, "You will not be permitted to retire until you have seen service and proved yourself deserving of the indulgence."

One of the reasons assigned for this exceptional treatment of navy surgeons is that they have received some instruction at Netley Hospital on entering the service, and that they have no right to expect to be allowed to retire from the service after having received such instruction at the public expense until they have repaid it by being out on active service. But this argument would apply equally to army surgeons, for they too are sent to Netley, and yet there is no compulsion on them to remain in the service. But what is the amount of instruction on which so much stress is laid? It is for a period, it may be, of two or three or four months, according to circumstances, at the miserable pittance of five shillings a day—a pittance not enough to keep a schoolboy of twelve years of age in clothes, washing, and food. And do these surgeons give nothing in return for this miserable pay? They give far more than value for it. They have under their immediate charge the sick and wounded in hospital; and if the State had not these gentlemen at five shillings per day, the State would have to pay more than double to their own half-pay surgeons to do the same duty. The gentlemen thus paid this miserable pittance are not students, but young men fully and legally qualified by their degrees or licences to be elected as medical officers of the best and largest hospitals in the United Kingdom. What would be thought of its being said by the Commander-in-chief to a cavalry officer, if he desired to retire within a year after the date of his commission, "You shall not retire until you have seen service; and, moreover, you have had three months' instruction in the riding-school of the depôt at the public expense, and you must stay where you are and as long as I please until you have proved yourself deserving of the indulgence"? Yet this is the language now adopted and addressed to the surgeons in the navy. If this is to be the practice, it is worse than the enlistment of sailor or soldier, for a sailor or soldier can look out to the termination of a certain number of years, and can purchase his discharge; but the unfortunate naval surgeon sees no prospect of release before him; indeed for him the 'scutcheon over the portal of the Naval Department may truly now bear upon it the words written over the portal of the "Inferno":

"Lasciate ogni speranza, voi ch' entrate."
("All hope abandon, ye who enter here.")

He is worse off than the kidnapped Fijian or "coolie," who may, if he can, escape from bondage.

A document has been forwarded to me from the Admiralty to show that navy surgeons, on entering the service, have bound themselves irrevocably for life, if such be the pleasure of the Admiralty. It is as follows: "I, A B, a candidate for employment in the Medical Department of the Royal Navy, do hereby engage for general service, and attest my readiness to proceed on duty abroad whenever required to do so." And this is adduced as proof that the navy surgeon has bound himself, neck and heels, to remain his lifetime, if so desired, in the service. I cannot read it so. I read it in the plain, common, and fair sense of the words—that, while he remains in the service, he will go wherever ordered, but not that he is absolutely and for ever to be forced to remain in the service; that he is to be deprived of the privilege of retiring enjoyed by other officers in the navy and by all officers and surgeons in the army. If it were to be deemed expedient to enforce compulsory service, the notice ought to be intelligible and plainly worded in terms such as these:—"You are hereby to understand that you are never to be allowed to resign until you have seen service, and proved yourself worthy of the indulgence to the satisfaction of the Lords of the Admiralty."

Three cases have come to my knowledge in which permission to resign has been refused. I believe one or two more have occurred within the last few months. The documents from which I quote are in my possession.

The first, A. B., was appointed in February, 1872. In May, 1873 (about a year and three months afterwards), from some domestic and pressing circumstances, it became necessary that he should abandon professional pursuits and devote himself to the care of his father's business. He accordingly sent in his letter of resignation; that was more than a year and a quarter after his appointment, and while he was on harbour-ship or hospital duty in England. He was refused. He again applied. There was no reply to this second application; but on the 21st of July, 1873, two months after he had resigned, he was ordered to proceed to a flagship in India, and obliged to sail last Thursday under threat of court martial; and the defence for this proceeding is that he is not to be allowed to resign until he has seen active service. But, even if the rule were a good one, he never had the opportunity of seeing active service; he was kept the whole time on duty in harbour ships or on shore, and then punished for not having seen what it was not in his power to have seen. If this gentleman had been on active or foreign service at the time of his application, and his place could not be supplied, I could understand a refusal until his place could be supplied; but sending him an order to embark for foreign service more than two months after his resignation shows that his services were not required at the time of his resignation, and is, it appears to me, an aggravation of the injustice and hardship.

In the second case the circumstances were similar: first, an application for leave to retire; secondly, a refusal; thirdly, a second application; and the only reply to this an order to embark in about forty-eight hours for the West Coast of Africa, followed by a communication from the Admiralty that unless he returned immediately to Plymouth he would be arrested by the police as a deserter. I do not want to question the legal right of the Lords Commissioners to order a navy surgeon or any other naval officer to be arrested by the police, even though some months had elapsed after he had sent in his resignation, and to force him to remain in the service; but I strongly dispute its expediency. Let us imagine what would be the feelings of officers and men if they saw the surgeon, to whom they were to entrust life and limb for voyage after voyage, brought on board by the police as a deserter, and informed that his services were to be had only under compulsion—services that never can be trusted and relied upon unless they come with a willing heart. This is not the relation that ought to exist between the officers and men of a ship of war and their surgeon, the officer to whom they should ever look upon as their voluntary and devoted friend on the most trying occasions of their lives.

The third case is so similar to the last that I do not think it necessary to go into its details—the same story, the same application to resign, the same refusal from the Lords of the Admiralty, application renewed, refusal repeated, and then the second refusal quickly followed by an order to go to a station as before on the West Coast of Africa.

There is really, as far as I can see, no excuse for what has occurred, and it will be impossible to divest the minds of the public and of the naval surgeons themselves as a body of the impression that the *post hoc* did really follow as a sequence *propter hoc*, that the order for the West Coast of Africa was an order to be interpreted as an intimation to navy surgeons that they must not henceforth dare to ask for the same privilege of retiring that is freely granted to other officers in their own service, and to all in the army at home and abroad; that they must be content to remain in a slavery to which no other officers, and not even private soldiers or men before the mast, are subject, and that if they dare to think otherwise the same penalty awaits them. It will be a great misfortune to the officers and men of the Royal Navy if this course is to be persevered in of refusing permission to naval surgeons to resign, for good men will not enter the navy as surgeons, and it is of more consequence to the navy than to the army that they should get good and willing men, for the navy is more dependent on its medical officers than the army. I think that navy surgeons should be treated as all other surgeons and officers are treated—that is, allowed to resign their appointments when not engaged on active service or on foreign stations where their places cannot be immediately supplied, and that

the cases of the three or four navy surgeons who, under the circumstances I have mentioned, have been refused permission to retire, should be reconsidered. The navy surgeons will soon find out for themselves what they are worth. I believe that brains and beef are equally commodities in the market of the world, and must find their own value, and if young men will continue to enter the navy as surgeons they will do it at their own peril, for they have now knowledge of what is before them; but those who conduct the affairs of the Royal Navy should weigh well in their own minds whether the facts and views now put forward are worthy of their attention. Let it be remembered that there is now a vast field opened to young surgeons in thousands of passenger and trading steamers over the whole world, with better pay, with more comforts, and with liberty to retire when they please; and that foreign governments are offering large bonuses for surgeons. I have heard it asserted that unless compulsory service is enforced in the Royal Navy, as contradistinguished from the army, men who enter the Royal Navy would not remain in it, so great are its disadvantages. If there be any foundation for the assertion, it presents a melancholy picture of the management of the Naval Medical Service.

I am Sir, very truly yours,

House of Commons, Aug. 5th, 1873. D. J. CORRIGAN.

TYPHOID IN MARYLEBONE.

To the Editor of THE LANCET.

SIR,—It has come to my knowledge that many cases of typhoid fever have recently occurred in this and neighbouring parishes amongst families who are supplied with milk from the same source. I shall feel under great obligation to any of your medical readers who may at the present time be treating the disease, or have recently done so in this or the neighbouring parishes, to inform me, with the least possible delay, of the source from which in these instances the supply of milk to the family has been obtained.

The great importance to the health of the community of the matter which my official position calls upon me to investigate is my apology for asking your valuable assistance.

I am, Sir, your obedient servant,

J. WHITMORE, M.D.,

Medical Officer of Health for the Parish of St. Marylebone.

August 6th, 1873.

GROUSE DISEASE.

To the Editor of THE LANCET.

SIR,—I beg to furnish you with some information respecting the grouse disease.

All birds I have examined during this or former epidemics contained tapeworm. In May last I obtained two birds, one from the neighbourhood of Kirriemuir, the other from Sir Thomas Gladstone's moor, near Fettercairn. Both were in good plumage; the one was emaciated, the other in good condition. The portion of the intestine above the tapeworm was impacted with dry vegetable matter, while the lower part of the gut contained liquid yellow feculent matter. I do not know to what extent the presence of tapeworm in grouse may be consistent with comparative health, and have never myself examined healthy birds for it, but it is well known that all wild animals are liable to be infested with entozoa.

In the winter of 1846 immense numbers of the razor-billed auk (*Alca torda*) were thrown up dead on the shores of the Firth of Forth. In all the specimens I examined the intestines contained tapeworm and other entozoa, but so familiar was I with these parasites in marine fishes and other animals, that I attributed the auk mortality at the time to the severity of the weather; but certainly neither before nor since have I seen so many of these birds cast on the shore, though there have been many more severe winters.

Supposing tapeworm to be the cause of the grouse mortality, we can easily understand how overstocking and the extermination of predacious birds may help to increase the evil; but when we find it occurring with a certain periodicity every five or six years, it is clear there must be some other cause for the spread of the disease.

Probably a careful study of the history of the grouse tapeworm, taken along with the meteorological conditions of the seasons and the conditions and moisture of the various moors, would throw some light on the subject.

Last season, being exceptionally wet, must have been peculiarly favourable to the preservation of the eggs of the tapeworm, many of which in a dry season would have been lost. Were previous epidemics preceded by wet seasons? I have neither the opportunity nor the necessary time at my disposal for carrying out investigations on this matter, but were those most interested—namely, the proprietors and lessees of moors—to offer a prize for the best essay on the grouse disease, I have no doubt that some reliable information would be elicited.

I am, Sir, yours truly,

Sunnyside, Montrose, July, 1873. JAMES C. HOWDEN.

PENCIL-CASE THERMOMETERS.

To the Editor of THE LANCET.

SIR,—Referring to the conflicting statements of your three correspondents in the last number of THE LANCET, I beg leave briefly to observe that although the registration of my pencil-case thermometer was only effected on the 3rd ult., the idea was originated by me some months before, and it would be easy for me to produce proof in support of this statement from more than one of my brother medical practitioners and others.

The simple slide pencil-case possesses the important qualities of simplicity and lightness over the more cumbersome and complicated, and therefore more expensive screw-propelling arrangements, which I abandoned in favour of the simpler device.

Desiring to avoid further trespass on your valuable space, I will merely add that my registration document, which one of your correspondents is good enough to esteem so lightly, includes other important features in addition to the form of the inside case, and in virtue or these, if for no other reason, I trust it may continue to hold a worthier place than the "waste-paper" basket.

I remain, Sir, yours obediently,

R. HARVEY HILLIARD, M.D.

Belgrave-terrace, Upper Holloway, Aug. 2nd, 1873.

PARIS.

(*From our own Correspondent.*)

IN connexion with a thesis recently published by Dr. Terrillon, and with a communication presented to the Société Médicale des Hôpitaux of this city by Dr. Féréol, there has been an important discussion at that Society on a subject of much interest—namely, "albuminous expectoration consecutive on thoracentesis." In 1863 Dr. Pinault had already drawn attention to the fact, cases of which were since published by various medical men, and Dr. Terrillon collected them all, adding observations of his own. The albuminous expectoration may take place after very simple cases of thoracentesis. Sometimes immediately after the operation, but more commonly some hours later, the patient is affected with dyspnœa, and throws up a quantity of slimy, yellowish, frothy liquid, which may occasionally attain the amount of two litres. When the liquid is allowed to rest, it presents three successive layers: an abundant layer of froth, a second layer of yellowish liquid, sometimes containing sputa, and lastly a third layer at the bottom of the vase, and which, on microscopical examination, shows a quantity of epithelial cells, white globules, and a few blood-corpuscles. The chief characteristic feature of this layer is that when treated by nitric acid it exhibits an abundant quantity of albumen, which is not the case in simple bronchorrhœa.

Dr. Terrillon mentions three clinical forms of the phenomenon: one a slight one, characterised by moderate dyspnœa and abundant expectoration; the second an intense one, with marked dyspnœa and cough, and which may last several days or weeks, and return on each puncture; the third form is the gravest, and is attended by suffocation. The abundant liquid fills the bronchi and

trachea, and the patient is rapidly asphyxiated (in one case in less than a quarter of an hour).

The debate at the Société Médicale more especially took in the etiology or means of production of the phenomenon. Two of the debaters—MM. Marrotte and Woillez—were of opinion that it was a passage of pleural liquid into the bronchi through perforation produced by the trocar. Indeed, Dr. Woillez thinks that perforation of the lung is most common, and that this albuminous expectoration may be taken to be the sign of the lesion. Many objections, however, were brought forward: the quantity of liquid in the pleura in the cases observed; the use of capillary trocars, which were withdrawn after the puncture, so that the lung on expanding could not be wounded by their points; the results of post-mortems in which no wound was observed—no symptoms of puncture of the lung, such as spitting of blood, &c.; and lastly, the fact that the phenomenon has been observed in cases of purulent pleurisy. It seems, therefore, that this theory must be abandoned.

Another explanatory view was brought forward by Dr. Féréol, who expressed an ingenious theory consisting in a combination of spontaneous perforation without pneumothorax, and the idea that in pleurisy the pulmonary parenchyma constitutes a kind of felt filter, which is mechanically pervious to liquid and through which the pleural fluid may ooze.

A third explanation, one based on physiological reasons and facts, was that proposed by MM. Hérard and Moutard-Martin, and which evidently satisfied the majority of the members. It runs thus: when a lung has been compressed for some time by a liquid and it resumes its normal dimension after an evacuation of the fluid, there takes place in the organ a kind of serous or sero-sanguineous formation, which may give rise to a quantity of serous fluid that can be expelled by the bronchi.

The physiological facts adduced in support of this explanation were: the section of the pneumogastrics determining the production of a frothy effusion on the bronchi and sanguineous congestion of the lungs, the effusion containing both mucus and serum, the latter of which is brought on by the pulmonary congestion consecutive on paralysis of the nerves; Niemeyer's observations that in pulmonary hyperæmia there takes place a liquid and serous transudation in the alveolæ; Jaccoud's observations that pulmonary œdema is the result of a serous exudation produced by prolonged pulmonary congestion. It can easily be understood that the sudden entrance of air into a lung deprived for a long time of its natural excitant may produce stimulation of the vessels followed by paralysis, which, in turn, would bring on congestion and œdema.

A practical conclusion to be drawn from the discussion is, that the pleura should not be emptied suddenly and entirely, and that evacuation of the liquid must be effected slowly and by repeated punctures, at intervals of one or several days.

M. Littré, the illustrious writer and *savant*, has been lately suffering from a large carbuncle on the chest, and was obliged to seek the country air in his cottage at Mesnil near Paris. He is now much better, and on full way to recovery.

M. Odillon Barrot, former minister under Louis Philippe, and present President of the French Council of State, has been very ill with a bad attack of bronchitis. An improvement has however taken place. M. Odillon Barrot is eighty-two years of age.

On Wednesday last the heat was very oppressive in Paris, and as many as ten cases of sunstroke were admitted into the hospitals.

The Prefect of Police of Paris has just addressed a circular to the pharmaciens of Paris, reminding them that they expose themselves to prosecution for refusing to deliver medicines in the night when wanted.

Paris, July 29th, 1873.

MEDICAL CORONERS.—Thomas Henry Hawkins, F.R.C.S., was on the 16th July elected by the town council of Newbury, Berks, the borough coroner, in place of Joseph Bunny, M.D., resigned, so making the third medical man who has been elected to the post. Dr. Bunny was appointed in the year 1839, and he succeeded a medical man (Mr. Hemsted), who held the office for some years.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was admitted as a Member of the College on July 31st:—

Curnow, John, M.D. Lond., Mitre-court Chambers.

The following gentlemen were on the same day admitted as Licentiates of the College:—

Barnard, Charles Edward, Tamworth-road, Croydon.
Bedford, Robert, Hereford-road.
Bomford, Gerald, King's College Hospital.
Curtis, Arthur, Alton, Hampshire.
Davis, Harry, Callington, Cornwall.
Deakin, Chas. Washington Shirley, Kingston Grange, Hereford.
Dodd, Alexander Russell, Westbourne-terrace-road.
Drake, Arthur John, Stratford.
Dyer, John Edward, Guildford street.
Eskell, Maurice Clifford, Grosvenor-street.
Fowler, Breame Weston, Castle-street East.
Gillingham, Alfred, Guy's Hospital.
Goodrich, Alfred, Fulham-road.
Goodchild, John Arthur, Heathfield House, Ealing.
Gray, Frederick Archibald, Charrington-street.
Green, James, Landport, Portsmouth.
Haig, Percy de Haga, Gilstone-road.
Harvey, Charles William, University Hospital.
Hartridge, Gustavus, Shrewsbury.
Keetley, Charles Robert Bell, St. Bartholomew's Hospital.
Kitchen, Chas. Frederick Hewick, Ogilvie-street, Manchester.
Lawrence, George Edgar, Claverton-street, Bath.
Lindsay, William Baltimore, Camden-road.
Millar, William, Cathcart-road.
Morris, Sydney, Hayes, Kent.
Murphy, John Francis, Ardravinia, St. John's Hill, Wandsworth.
Osler, William, Stanhope-street.
Reid, Alexander, Towlaw, Darlington.
Risdon, George Owen, Charlwood-street.
Sobey, Arthur Lyne, West London Hospital.
Symons, John, Manor Villas, Hackney.

NAVAL MEDICAL SERVICE.—The following candidates were successful at the competitive examinations held at London in February and at Netley in August, 1873, after having passed through a course at the Army Medical School, Netley, and will receive commissions as Surgeons in Her Majesty's Navy:—

	Marks.
Wellings, B. W., Glasgow	4465
White, R. D., Dublin	4309
Leech, J. R., Cork	4336
Wilson, J., Belfast	4185
Madders, H. J., Cork	4180
Lucas, E. A., Dublin	3675
Sproule, R., Dublin	3531
Godding, C. C., London	3355
Browne, S., Belfast...	3137
Flood, A., Dublin	2795
Harrison, E. B., London	2770
Fitzgerald, M., Dublin	2730
Hamilton, S. F., Dublin	2413
Magrane, C. W., Dublin	2402

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 31st:—

Carter, Albert, Belvedere, Kent.
Carter, Francis Richard, Potter Newton, Leeds.
Corbin, Edward Kennersley, Guernsey.
Davies, James Harries, Llandyssul, South Wales.
Griffiths, David, Abersayron, South Wales.
Hawton, James William Hambly, Devonport.
Jones, Thomas Evan, Buarthyfoil, Anglesea.
Welch, William John Joseph, Stourbridge.

The following gentlemen also on the same day passed their Primary Professional Examination:—

George Bate, St. Thomas's Hospital; Edgar Duke, Guy's Hospital; Richard Hingston Fox, London Hospital; Edward Jepson, John Spark, Frederick Henry Spooner, and Fred. Watts, St. Bartholomew's Hospital; Samuel John Thomson, St. Mary's Hospital.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The library will be closed for one month from August 11th to September 10th, both days inclusive.

THE ADULTERATION OF FOOD ACT, 1872.

THE following list, in alphabetical order according to districts, is from a Return just printed, by order of the House of Commons upon the motion of Lord Eustace Cecil, of public analysts appointed under the above Act. The Return is very incomplete, and fails to give the most necessary information—viz., salaries, &c., which we therefore add, together with titles, so far as we are able. We purpose giving a list of additional appointments next week.

Districts.	*Analysts.*	*Salaries &c.*
Bedford, Borough ...	Chas. Edwd. Prior, M.D. ...	£50 per annum.
Bedfordshire	Thomas Stevenson, M.D.	
Berkshire	W. F. Donkin, M.A., F.C.S.	
Birmingham...	Alfred Hill, M.D.	

Districts.	*Analysts.*	*Salaries &c.*
Bolton	Mr. John Collins	£30 per annum.
Carnarvonshire	Dr. James Campbell Brown	£5 per annum, and £1 1s. per analysis.
Cheshire	Dr. James Campbell Brown	£100 per annum, and 6s. per analysis.
Denbighshire	Mr. John Jones Bancroft.	
Derbyshire	Wentworth L. Scott, F.C.S.	
Essex	Henry Letheby M.B. Charles Meymott Tidy, M.B.	
Glasgow	Thomas E. Thorpe, F.R.S.E., F.C.S.	
Gloucester, City	John Horsley, F.C.S.	£30 per annum.
Gloucestershire	John Horsley, F.C.S.	£116 per annum, with offices.
Gravesend	Jas. Henry Gramshaw, M.D.	£15 per annum, and fees.
Greenock	Mr. Thomas Law Patterson. Mr. Thos. Robertson Ogilvie.	
Hackney	John William Tripe, M.D.	
Hertfordshire	Henry Letheby, M.B. Charles Meymott Tidy, M.B.	
Holborn	Prof. Theophilus Redwood.	
Lewisham	Mr. Charles Heisch.	
Lincolnshire	George May Lowe, M.D.	
Liverpool	Dr. James Campbell Brown.	
London, City	Henry Letheby, M.B.	
Manchester	Charles Estcourt, F.C.S.	£150 per annum.
Norfolk	Mr. Francis Sutton.	
Nottinghamshire	Edgar Beckit Truman, M.D.	
Oxfordshire	W. F. Donkin, M.A., F.C.S.	
Paddington	William Hardwicke, M.D.	£150 per annum.
Plumstead	Mr. George William Wigner.	
Poplar	Wm. T. G. Woodforde, M.D.	
Queen's County	Charles Cameron, M.D.	
St. Giles, Camberwell	Dr. Albert James Bernays.	
St. George & St. Giles, Bloomsbury	Prof. Theophilus Redwood	£100 per annum.
St. George, Hanover-square	William Henry Corfield, M.D.	£280 per ann. as med. officer of health & public analyst.
St. George-the-Martyr, Southwark	Dr. John Muter.	
St. James & St. John, Clerkenwell	Prof. Theophilus Redwood	£100 per annum.
St. James, Westminster	Dr. Edwin Lankester.	
St. John, St. Olave, and St. Thomas, Southwark	Jas. Northcote Vizen, M.D.	£50 per annum.
St. Leonard, Shoreditch	Thomas Stevenson, M.D.	£20 per annum, and 10s. per analysis.
St. Luke, Chelsea	And. Whyte Barclay, M.D.	
St. Luke, Middlesex	Fredk. William Pavy, M.D.	
St. Mary, Islington	Charles Meymott Tidy, M.B., F.C.S.	Salary to be fixed at end of first year.
St. Mary, Lambeth	Dr. John Muter.	
St. Marylebone	John Whitmore, M.D.	Salary to be fixed at end of first year.
St. Mary Magdalen, Bermondsey	Dr. John Muter	From 2s. 6d. to 10s. 6d. per analysis.
St. Mary, Newington	Dr. John Muter	From 2s. 6d. to 10s. 6d. per analysis.
St. Pancras	Thomas Stevenson, M.D.	
St. Saviour, Southwark	Robt. Bianchi, M.R.C.S. Eng.	
Salop	Henry Johnson, M.D. Mr Thomas Porter Blunt	13s. 4d. per analysis.
Sheffield	Mr. Alfred Henry Allen	£100 per annum.
Surrey	Thomas Stevenson, M.D.	£157 10s. per annum.
Wandsworth	Dr. John Muter.	
Warwickshire	Alfred Hill, M.D.	£75 per annum, and 10s. per analysis.
Westminster	Dr. Dupré	£100 per annum.
Whitechapel	Charles Meymott Tidy, M.B.	
Wolverhampton	Mr. Edwd. Wm. Taylor Jones.	

Medical Appointments.

BOWEN, J. H., M.R.C.S.E., has been appointed House-Surgeon to the Salford and Pendleton Royal Hospital and Dispensary, Manchester, vice Shearman, resigned.

CLARKE, L., M.D., F.R.S., has been appointed Consulting Physician to the Provident Medical Institution and Lying-in Charity, Pimlico-road, vice Dr. C. J. B. Aldis, deceased.

CUMBERBATCH, A. E., M.R., F.R.C.S., has been appointed Demonstrator of Anatomy at St. Bartholomew's Hospital.

DOWNS, P., M.D., M.R.C.S.E., has been appointed Medical Officer for the Stockport District of the Stockport Union, vice Blackshaw, resigned.

FENEI, L. M., M.R.C.S.E., L.R.C.P.L., has been appointed Surgeon to the Westminster General Dispensary, vice Alfred Ashby, M.B., F.R.C.S.E., resigned.

FOREBOKE, G. H., M.R.C.S.E., has been appointed Medical Officer of Health for the Aicester Rural and other Sanitary Districts combined: £600 per annum.

FOWLER, G., M.R.C.P., has been appointed a Visiting Physician to the Infirmary for Consumption and Diseases of the Chest, Margaret-street, Cavendish-square.

FURNER, W., F.R.C.S., has been appointed Demonstrator of Anatomy at St. Bartholomew's Hospital.

HADEN, E. C., M.R.C.S.E., has been appointed Resident Medical Officer to the Workhouse and Infirmary of the Wandsworth and Clapham Union, vice Cooly, resigned.

HALL, J. C., F.R.C.P.Ed., F.R.C.S.E., has been reappointed a Physician to the Public Hospital and Dispensary, Sheffield, for a further term of seven years.

HAMILTON, F. G., M.R.C.S.E., has been appointed House-Surgeon and Assistant-Secretary to the West Hertfordshire Infirmary, Hemel Hempstead, vice Case, resigned.

HODSON, W. E., L.R.C.P.Ed., M.R.C.S.E., has been appointed a District Surgeon to the Salford and Pendleton Royal Hospital, Manchester, vice Bonser, appointed House-Surgeon.

HOPKINS, R., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Pontypridd District of the Pontypridd Union, and Medical Officer to the Workhouse, vice Morgan, deceased.

HOYLE, G., M.B., C.M., has been appointed Assistant House-Surgeon to the Halifax Infirmary and Dispensary, vice Steele.

JONES, J. J., M.B., C.M., has been appointed Medical Officer to the Margam and Avon-vale Tinworks, Tewgoed Colliery.

KENYON, G. A., M.B., M.R.C.P.L., has been appointed Medical Officer of Health for the Chester Rural and Urban and other Sanitary Districts combined: £600 per annum.

KERR, A. D., M.B., C.M., has been appointed Assistant Medical Officer to the Buckinghamshire Lunatic Asylum, Stone, vice Alexander, resigned.

LANPHIER, R., M.B., L.R.C.S.I., has been appointed Medical Officer for the Alford District of the Spilsby Union, vice Handsley, resigned.

LAW, J., M.D., has been reappointed a Physician to the Public Hospital and Dispensary, Sheffield, for a further term of seven years.

LUDLOW, T. S., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Burbage District of the Hinckley Union, Leicestershire, vice C. E. Ludlow, L.R.C.P.Ed., deceased.

MATCHAM, A., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Christchurch District of St. Saviour, Southwark, vice Barrett, resigned.

MILLIGAN, J., M.R.C.S.E., has been appointed Medical Officer for the Keighley Rural Sanitary District, combined with other Urban and Rural Districts within the Keighley Union: £300 per annum.

MORGAN, Mr. Geo., has been appointed House-Surgeon to the London Hospital.

PARADISE, T. D., M.R.C.S.E., has been appointed House-Surgeon, Apothecary, and Secretary to the Stamford, Rutland, and General Infirmary, vice Gibbings, resigned from ill-health.

PEIRCE, F. M., M.D., L.R.C.P.L., has been appointed a Physician to the Hulme Dispensary, Manchester.

PUSEY, C., L.R.C.P.L., M.R.C.S.E., has been appointed Surgeon to the Liverpool Royal Infirmary Lock Hospital, vice Worthington, resigned.

RICHARDS, E., F.R.C.S.E., has been appointed Resident Medical Officer to the General Hospital, Birmingham, vice Greenway, resigned.

SINCLAIR, W. J., M.B., C.M., has been appointed Medical Officer to attend Patients of St. Mary's Hospital and Dispensary for Women and Children, Manchester, at their homes, vice Hodson, resigned.

TRAILL, H. S., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Winkleigh District of the Torrington Union, vice Dingley, deceased.

WANKLYN, Mr. J. A., has been appointed Public Analyst for Buckinghamshire.

WATMOUGH, W., M.R.C.S.E., has been appointed Medical Officer for the Eastern District of the Christchurch Union, vice Morrill, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BROOKE.—On the 1st inst., at Silverdale, N. Stafford, the wife of J. E. Brooke, M.R.C.S., L.R.C.P., of a daughter.

BROWNE.—On the 3rd inst., at H.M.'s Dockyard, Devonport, the wife of Dr. Thos. Browne, of a daughter.

CLOVER.—On the 31st ult., at Cavendish-place, the wife of J. T. Clover, F.R.C.S.E., of a son.

GAIRDNER.—On the 31st ult., at Ardrossan, Ayrshire, the wife of Professor Gairdner, M.D. Glas. Univ., of a son.

MOLONY.—On the 24th ult., at Waterbeach, Cambridge, the wife of P. J. Molony, J.P., B.A., M.B., of a daughter.

PERKINS.—On the 27th ult., at Snaith, Yorks, the wife of Thomas Perkins, M.R.C.S., of a daughter.

SIMPSON.—On the 3rd inst., at Queen-street, Edinburgh, the wife of Professor Simpson, of a son.

TEALE.—On the 30th ult., at Belvoir-terrace, Scarborough, the wife of John W. Teale, M.A., F.R.C.S.E., of a son.

THOMSON.—On the 23rd ult., at Fermoy, the wife of Alex. Thomson, M.D., Surgeon Army Medical Department, of a son.

MARRIAGES.

COATES—BECKETT.—On the 31st ult., at St. John's Church, Moulsham, Chelmsford, Essex, Frederick Thomas Coates, M.R.C.S.E., of Euston-road, London, to Anna Maria, the only daughter of Mr. Wm. Beckett, of Mildmay-road, Chelmsford, late of Walpole, Suffolk.

DOUGAN—MACKENZIE.—On the 31st ult., at the Manse of Jura, William Dougan, M.D., of Lochgilphead, to Flora Mary, only daughter of the Rev. Lachlan Mackenzie, Minister of Jura.

SPURGIN—SALE.—On the 6th inst., at Clifton, near Rugby, Herbert Brasswhite Spurgin, Esq., Surgeon 49th Northamptonshire and Rutland Militia, of Northampton, to JANE ANNA, younger daughter of the late Edward Sale, Esq.

DEATHS.

ANDERSON.—On the 26th ult., Wm. H. Anderson, L.R.C.P.Ed., of Theddlethorpe, Lincolnshire.

PATERSON.—On the 14th ult. on board the Steamship "Golconda," on the homeward passage from India, Frederick Robert Paterson, L.K.Q.C.P.I., Assistant-Surgeon Madras Army, aged 29.

READE.—On the 1st inst., H. C. Reade, M.R.C.S.E., of Clifton, Deputy Inspector-General of Hospitals, H.P., aged 66.

RITCHIE.—At St. John-street, Manchester, C. Currie Ritchie, M.D., aged 30.

RODWELL.—On the 5th inst., at Loddon, Norfolk, Geo. Rodwell, M.R.C.S.E., formerly of the Ship "Edinburgh," E.I.Co.'s service, aged 94.

Notes, Short Comments, and Answers to Correspondents.

MADHOUSES IN SPAIN.

THE Spanish peninsula, in the opinion of not a few observers, is now one vast lunatic asylum, in which it would be difficult to decide who are the least sane—the keepers or the patients. Persiflage, however, apart, there is no doubt that in Spain, as in Italy, and latterly in France, political excitement is the most prolific cause of mania in all its forms. The special correspondent of the *Daily Telegraph* gives a vivid description of the Casa de Locos at Leganes and its management. The lodge, which was the first apartment entered, is a scantily furnished, whitewashed room, with ragged matting on the floor, eight bottomless chairs, a hand lantern, and a gigantic green rattle of sufficient force to waken a whole village in case of need. The long delay before the Senor Director had concluded his dinner and the inevitable post-prandial cigar was at length overcome, and the building was then visited. The patients were found to be divided into three classes—the first paying 12 reals (about 2*s.* 6*d.*) a day; the second, 6 reals (or 1*s.* 3*d.*) a day; and the third being paupers. The common sitting-room was occupied by fifty patients of the first class, some seated at table in evident melancholia, others glaring aggressively at intruders, others huddled up in corners. From the sitting-room progress was next made to the exercise ground, a courtyard without grass, but boasting a few trees. Here again the groups were either listless or restless. An artillery officer who had followed the visitors from the sitting-room followed them, furious and loquacious; but on a motion from the attendant he skulked away in silence. In one of the bed-rooms a naval officer was found surrounded by books, but hopelessly incurable. Ascending a staircase, more bed-rooms were arrived at, containing each seven beds for six patients and one attendant. They were well aired; but an offensive smell, probably from bad drainage, was distinctly perceptible. There are separate bed-rooms for the violent, in one of which a patient, tightly strapped down, was writhing and roaring with frightful violence. The Director, "a small, kindly-hearted, intelligent man, with a twinkling eye," conducted the visitors to the third class, with whom it at once became evident he was a favourite; thence to a padded room, which was "occupied by a respectable, well-mannered, good-looking man and a keeper." The patient rose on their entering, bowed, and welcomed the Director. He had been many years in the Casa de Locos, and was a professor of Oriental languages, four of which he could speak fluently and well. For twenty years "no inmate has ever been cured." But the place is healthy, the deaths not exceeding 6 per cent. per annum. The asylum is visited once a month by the Medical Commission, and once a year by the Commission of Administration. "Good food," think the authorities, is the basis of moral regeneration," and no kind of ill-treatment is committed. The female department contains 81 lunatics, some of whom are inmates of some sixteen to twenty years' standing—"love" being the main cause of their malady. Pensive madness is predominant, the "maniac statues, with heads bound in handkerchiefs, being fearful objects." The chapel and wardrobe were well kept. The staff of the asylum consists of a director, a doctor, a priest, a secretary, 15 keepers, 8 female attendants, and 12 sisters of charity. "So far as the arrangements go," says the *Daily Telegraph's* commissioner, "I discovered nothing to complain of." Would that the larger asylum called Spain herself merited an equally favourable report!

Capt. C. Mercier.—On account of the enormous space taken up by the report of the meeting of the British Medical Association, we are again compelled to postpone the publication of Capt. Mercier's letter on St. John's Hospital till next week.

THE MEDICAL COLLEGE, EPSOM.

To the Editor of THE LANCET.

SIR,—The principles of justice and the love of truth prevent me from allowing the letter in your last issue, signed "E. Sloman," to pass unnoticed. I therefore hope you will insert the following.

I will not dispute that the writer has had considerable opportunity of observing the state of the cuisine department at the College during his seven years' school career. I will even grant that he may have had more opportunity of doing so than I had in my seven years; but from the conclusions he has drawn I will dispute that his observance has been correct and unbiased. My *coup d'état* has not only been against the food, your correspondent says, but I imply that the Council do not visit the dining-hall now as they did. To which he replies: "This is an entire mistake, since during the last term several members of the Council have two or three times visited the hall." Surely this is no proof that they visit it now as they used to do; and if they did so two or three times during the past term, all I can say is that their visits have been ineffective. The opinions entertained both by the boys throughout the school and by their parents as to the very inferior quality of the food are so current that I see no necessity for my mentioning it again. Concerning complaints about the living during my school days at Epsom, I say I do not recollect any, nor can I believe in any ubiquitous person who thinks he is aware of trifles which may have happened at the College even before he thought of going there. I hope that not only past but present Epsomians will come forward, and, like "H. S.," bring to light the true facts of the case, and then, next term, we may hear of better living than "rice, soaked bread, and questionable cocoa."

I remain, Sir, yours truly,

August 4th, 1873. AN OXONIAN AND OLD EPSOMIAN.

INVALID TRAVELLING.

THE day is not far distant when patients may venture on a railway journey, not only without dread, but with positive alacrity. The term "Houses on wheels" accurately describes the vehicles now serving on Continental lines, and meant to be adopted at home. Saloon carriages and offices connected by covered passages form a "house," divided into dining- and drawing-rooms, bed-rooms and kitchens. The Empress of Russia's travelling train has a dining-room with large oval windows, giving uninterrupted views over the country through which the train passes; while the drawing-room is as elegant and the bed-rooms as amply furnished as those of a well-appointed house. The beds are hammocks, protecting their occupants during sleep from the vibrations of the train. On a less luxurious scale, carriages are similarly arranged and fitted up for her Imperial Majesty's subjects.

Mr. N. P. Betts had better refer to one of the medical officers of the institution.

SEVERE INJURY TO THE SCROTUM.

To the Editor of THE LANCET.

SIR,—I send you a report of the following case, which I think is worthy of record in the columns of your journal.

On May 6th I was sent for to see a farm servant, who lived about six miles off, and who was said to have sustained a severe injury from the wheel of a loaded cart having gone over him. He is a married man, about thirty years of age, and the father of six children. When I arrived, the patient was in bed, moaning, and complaining greatly of pain in the front of his thighs and lower part of abdomen. His trousers at these parts were saturated with blood, and still on him. He complained of cold over all his body, and he was shivering. His pulse was very feeble, and his hands and feet felt very cold. From the nature of his conversation and from his breath, he had been evidently having some strong drink, which he admitted, but by this time was getting sober. The accident took place about ten miles from where he lived, and he was brought home all that distance on the top of a loaded cart, though he complained greatly of pain, and it was so excessive that he leaped off the cart several times; but his companions persisted in putting him on again, and bringing him home. I carefully removed his trousers; found the front of both thighs swollen, discoloured, and a deep incised wound about an inch long at the upper and inner part—in Scarpa's triangle—of the right one. He complained of them being very stiff and painful. There was no further injury to the bone or to the bloodvessels so far as could be made out. The upper part of the right side of scrotum was laid open for about two inches, and the wound extended also to underside of penis for more than an inch; through this opening the right testicle was extruded or squeezed out, and it was lying out in front of right thigh, but still attached by the cord. It as well as the cord looked to be uninjured. I passed the catheter, drew off some urine, which looked quite normal, and the urethra in its course was also uninjured, or there were no signs of any injury. Having no chloroform with me, and the patient being so very weak and complaining so much, especially when touched, and having also very bad light (it being at night), and the assistance only of two women, I satisfied myself with returning the testis to the scrotum, and putting in a suture or two to keep it there till the morning, when I could better judge of the state of the parts, and whether the testicle should be removed.

Next morning, accompanied by Dr. Hume, we visited the patient, and found that, although he had passed a sleepless night, it was from the pain in the thighs, and not from any suffering from the injured scrotum or testicle, which could be handled without causing any inordinate pain. We chloroformed the patient; opened the scrotum again; examined the testicle, and found it looking well, and seemingly uninjured; carefully and properly replaced it; sewed up the scrotum again and the injured part of the penis; put on cold applications, and put the patient comfortably back in bed. On movements a good deal of bloody and serous fluid escaped from the wound in the thigh. From the state of his bowels I ordered a dose of castor oil to be given next morning.

May 8th.—Patient still complained of his thighs, but otherwise felt somewhat better; still had slept none; pulse 70; good appetite returning after the bad effects of the drink he had had; no pain in scrotum nor swelling; looking well. Morphia draught ordered at bedtime, and the scrotum to be kept in a suspensory bandage.

9th.—Patient much the same; little or no sleep yet.

11th.—He is still keeping better; slept a little last night, though he talked a good deal in his sleep, and was restless. The want of sleep seemed to be more from the nervous shock he had sustained than from any pain he suffered. The morphia in good doses had little or no effect. To-day his tongue is clean and appetite good; bowels have been opened; still no pain in scrotum, and the wound seems to be healing almost all by the first intention.

14th.—Patient seems very well; thighs less stiff; swelling almost gone, and no pain anywhere else; wound all healed and sutures removed, except at one part, which was not healing so kindly; the edges of this part were touched with nitrate of silver, and brought better into contact.

19th.—Patient got up for the first time; the only inconvenience he suffered was from weakness and stiffness in the thighs.

About the middle of July I heard from him, and also from a medical man who saw him. He had been working for a month or six weeks, felt strong and well, the only complaint being a slight feeling of tightness or twitching about the "lower part of his bowels." The doctor who saw him said he thought there was slight, but very slight, swelling of right testicle; otherwise everything seemed healthy and normal.

About three weeks ago I saw another case of injury to the scrotum in a boy, nine years of age, who had been swinging on a chain, the hook of which caught in the skin of the scrotum, and tore it up. The skin retracted a good deal, and the inner tissues kept protruding, requiring a suture (wire) less than every half inch. To get this done the boy had to be chloroformed. The parts healed very well, and all the sutures were removed within a week.

I remain, Sir, yours truly,

Jedburgh, N.B., August 4th, 1873. W. B. HUNTER, M.D.

The Plaintiff in the Action at Law has sent to us a very long letter (ten sides of foolscap) in reply to the letter of Dr. Forbes Winslow, which appeared in our impression of the 14th June, and impugning the accuracy of some of the statements of Dr. Winslow. We really must be excused for declining to enter into the controversy.

PROGRESS OF MEDICINE IN CHINA.

DR. F. WONG, in his Report of the Health of Canton, makes some remarks as to the likelihood of the Chinese abandoning their own and adopting European medicines in the treatment of fevers. The prospect appears to be very remote. In the first place, they are well satisfied with their own medicines, which give a fair amount of success; and in the second place, European medicines not having a fair trial in the treatment of fevers among the Chinese, we are unable to demonstrate their superiority. Quinine is the only febrifuge which has a marked superiority over those of the Chinese. To show the Chinese the superior efficacy of European medicines, we must be able to effect cures quickly and decidedly, especially in those cases where their own fail; and when this is done, Dr. Wong has no doubt that, wedded as they may be to their own system, they will see advantages in European methods of treatment. Supposing quinine to have a fair trial, two circumstances will always prevent its superiority being made very evident to the Chinese—first, there are many fevers in which quinine has no sphere of action, and in which expectant and general plans of treatment must be adopted; and secondly, the Chinese can to a very considerable extent cure with their own medicines the cases in which quinine is efficacious. The difficulty of the Chinese is chiefly felt in fevers of a continued type or malignant character, in which quinine makes but little or no impression, and other European medicines, possessing no specific power over fever, cannot appear to decided advantage.

Dr. Bacot.—The letter has unfortunately been mislaid.

HEALTH-RESORT FOR PULMONARY CASES.

To the Editor of THE LANCET.

SIR,—Among the many places of resort recommended for pulmonary cases, few if any will bear comparison with the country to the north of the Cape Colony proper, including the Orange Free State, the Transvaal Republic, and Griqualand West (the latter the youngest colony of the British empire).

Numerous cases of phthisis, even after formation of vomicæ, have come to my knowledge in which patients have derived almost marvellous benefit from residence in that part of South Africa, and its suitability for sufferers from this class of disease has been recognised by Dr. Walshe in his well-known work on Diseases of the Lungs (1871), p. 637; and by Dr. Symes Thompson at the meeting of the Royal Medical and Chirurgical Society, April 8th, 1873. It may, therefore, interest many of your readers to know that an attempt is being made to establish an Invalid and Convalescent Home at Bloemfontein, the capital of the Orange Free State, as will be seen by the accompanying prospectus which I have received from the Bishop of Bloemfontein, whose kindly interest in the matter has been excited, as he writes to me, "by seeing so many come here in search of health." In addition to the altitude—4000 to 5000 feet above the sea level—of these countries, the chief characteristic is the extreme dryness of the atmosphere. In evidence of this I may state that the average difference between the wet and dry bulb thermometer for the months of November and December, 1872, was 11·3° and 11·2°, as recorded in my office at New Rust, Griqualand West.

Your obedient servant,
JOHN E. DYER,
Late Government Sanitary Inspector, Diamond Fields, S. Africa.
Guildford-street, Russell-square, July 29th, 1873.

Mr. Jonathan Crocker.—We decidedly think that Mr. Crocker is entitled, if not to the full fee of £3, to a fee. As he did not have to do the first setting of the fracture, it may be argued that he did not come within Art. 177. But his case is provided for in Art. 181. It is distinctly meant to include cases of special service not covered by Art. 177, in which the ordinary salary of the Poor-law officer is not held to remunerate him. Our correspondent should take legal steps to recover some extra remuneration if it is not granted, and we should be glad to be informed of them.

T. W. may pretty confidently rely on his change of residence being correctly inserted. The question which he puts to us at the end of his letter is entirely beyond our cognisance.

THE communication of *J. M. G.* (Canton, Miss.) shall be forwarded to its address.

HAY FEVER.

To the Editor of THE LANCET.

SIR,—In your notice of Dr. Wyman's book on Autumnal Catarrh you remark: "Dropping a solution of quinine into the nostrils is not known to have succeeded in relieving the nasal symptoms of the disease." I have recently prepared from a foreign prescription a snuff containing quinine for hay fever, which has not only relieved the nasal, but the general symptoms in a remarkable degree. I have no objection to send the formula to any of your professional readers who may wish to test it, on receiving a stamped envelope for its enclosure. Your obedient servant,

Glastonbury, Aug. 1st, 1873. T. MAYNEW.

Thermic Fever.—Our correspondent is quite correct. The temperature in cases of sun-stroke or heat-apoplexy is often very high—from 105° to 110° F. The pupils are usually contracted. There can be no doubt that the primary indication is to lower the temperature, and we should be inclined to strip the patient, place him near an open window, and cover him with a wet sheet, sprinkled continuously with cold or iced water, as Dr. Flint suggested. Ice might be applied to the head. In cases occurring on the march, douche the patient freely with cold water, place him under the shade of a tree, and administer some diffusible stimulant as soon as he is able to swallow.

L.R.C.P., (Basingstoke.)—We are not aware of any London surgeon who does so.

Mr. W. L. White (Saroch) must consult THE LANCET of last week, in which he will obtain all the information that it is in our power to supply.

JOCKEY TRAINING.

WHAT Sam Weller remarked of postboys, that they never died, but posted off imperceptibly to the other world, seems scarcely true of jockeys, among whom there has been much mortality of late. Their career upon the turf is usually brought to a premature close beneath it, and the reasons for this are not far to seek. Over-training—a subject on which Admiral Rous and Sir Joseph Hawley are well known to differ as regards racehorses—admits of no divergence of opinion as regards their riders. Poor Wells, the jockey who had so often carried the Hawley colours to victory, always complained of the severe sweatings which he underwent to keep down his weight. The vitality of the constitution must inevitably be impaired by such repeated ordeals; while the excitement of the race, and the sudden transition to long periods of absolute idleness, if not dissipation, must assist the deteriorating process. The genius of the turf is always an exacting deity; and not only the fame and fortune of its votaries, but the lives of its animated instruments, whether biped or quadruped, are not seldom sacrificed at its shrine.

Mr. A. G. Miller, (Edinburgh.)—Pressure on our columns, and the late date at which our correspondent's communication has been received, will prevent our referring to the subject this week; but it shall have our early attention.

THIRD ATTACK OF MEASLES.

To the Editor of THE LANCET.

SIR,—In reply to Mr. Anderton's inquiry in your impression of July 26th respecting a case of measles appearing for the third time in his practice, and asking for information from others who may have met with similar cases, I am in a position to state that I have met with one such case in my practice, the patient having been under my charge since she was four years old, being a niece of my wife's. The first attack occurred before she came to reside with me; in the last two I attended her myself. I can further state that she has had three attacks of scarlatina—the first time soon after her birth, and the other two at an interval of about four years. Each time I attended her the rash was as severe as in a primary case, and the desquamation of the skin as great; the usual sore-throat was also present. My confirmation of the first attack is that a brother was ill with it at the same time, and died. My patient has generally enjoyed good health since, excepting an occasional bilious attack, and is now engaged in a house of business, and nineteen years of age.—Yours very truly,

JAS. HADAWAY, L.R.C.P. Ed.
Welbeck-street, Cavendish-square, July 31st, 1873.

To the Editor of THE LANCET.

SIR,—Will you allow me, through your columns, to inform Mr. Anderton that some years since the case of a boy who had had three attacks of measles occurred in my practice. I attended him during the second and third attacks, which presented the usual well-marked symptoms. When first consulted, I doubt whether my diagnosis was credited by the mother, because, upon the authority of a medical man who had attended him, he had already had measles. However, within two or three months (speaking from memory) I attended him again, and during that attack I took with me a medical friend, who, of course, confirmed my diagnosis, though until then he barely believed in the possibility of a recurrence of the disease.

I am, Sir, faithfully yours,
Old Kent-road, July 30th, 1873. HENRY GREEN.

To the Editor of THE LANCET.

SIR,—As the subject of the third attack of measles is attracting notice just now, I trust the following case will not be deemed unworthy of record, although it comes from only a "medical student." No doubt cases of a second and even of a third attack of measles are of frequent occurrence in the practice of most medical men; but I am not sure if they have met with the case of a *fourth* attack.

The case is that of a little girl, aged about nine, who had the first attack when six months old, and the three subsequent ones when about eight or nine years of age, and these last occurring in the space of two years and a half. Previous to the three last attacks she had scarlet fever. She now suffers from attacks of offensive discharges from the ear, and the appearance of a "cluster" of vesicles on the face, which discharge and disappear in a few days. There is scrofula and phthisis in the family.

I myself was attacked with measles when three or four years old, and had a second attack when twenty. Yours faithfully,
Edinburgh, August, 1873. A MEDICAL STUDENT.

Mr. C. M. Heim was right in seeking promptly the severance of the well and the cesspool. We do not apprehend that foul drainage or water could be the cause of scarlet fever; but either might seriously aggravate the disease.

A Health Officer.—We do not know the results of Goux's system; but it has been practically tried at Aldershot Camp, and, we believe, with success.

THE letter of *Dr. Samuel Theobald* (Baltimore) shall receive attention.

THE TREATMENT OF INCONTINENCE OF URINE.

To the Editor of THE LANCET.

SIR,—Having generally had cases of incontinence of urine among the recruits of my regiment, and hitherto, after adopting all the means I could think of for curing them, have sometimes failed, and I have been under the necessity of discharging the men. Seeing belladonna strongly recommended in THE LANCET, I gave it a fair trial in two cases, and failed in both. There being a case of delirium tremens in the hospital, which I treated successfully with hydrate of chloral, it struck me that this medicine might answer in incontinence of urine. I gave it a fair trial, commencing with ten grains twice daily, increasing the dose to thirty grains twice daily. After six days' treatment the two cases were completely cured, and at the end of the training the men had been constantly at duty without any return of the complaint. I think it right to mention this that others may have the opportunity of testing it.—Your obedient servant,

T. S. MACCALL, M.D., &c.,
Lancaster, July, 1873. 1st Royal Lancashire Militia.

Enquirer.—The Medical Act of 1858 gives no power to deal with such cases so long as no false titles or pretensions to be registered are used. The Apothecaries Act is violated by a chemist who attends patients and prescribes and supplies medicines as a medical man. The Society, to its praise be it spoken, is more ready to prosecute offenders than most of the Corporations. As to "those men who use the title 'Dr.' on the strength of the L.R.C.P. Lond.," they not only do wrong, but know that they are doing wrong.

Mr. Henry W. Drew.—Some useful papers of the kind will be found in Cassell's Domestic Medicine; but, as a rule, the personal advice of a sensible medical attendant is preferable.

Dr. A. G. Lawrence.—Our correspondent's letter was too late for notice last week. He has probably settled his differences with the Board ere this. If not, we shall be glad to know the present state of the question.

Mr. Samuel Colbourn.—The great pressure on our space this week compels us to postpone the publication of the letter till our next issue.

VACCINATION AWARDS.

To the Editor of THE LANCET.

SIR,—I, like Mr. Fred. Manby, your correspondent in last week's LANCET on the above subject, hold appointment as public vaccinator in two unions. In one the vaccination inspector objected to some slight informality in my book; therefore I presume withholding any grant I may be entitled to. In the other union he expressed himself perfectly satisfied, and yet I have received no grant. Is the sin committed in No. 1 union sufficient to withhold the grant in both? Yours faithfully,

August 4th, 1873. R. Q.

W. B. (Manchester) will find the information in different works on Hygiene, notably in that by Prof. Parkes. The water required for drinking, cooking purposes, &c., will be about 4 gallons; and from 7 to 9 gallons will be required for cooking and personal washing, &c., exclusive of baths. The water-supply in some cities averages 35 to 40 gallons per head; in others it is nearly double that amount; and in a few, like New York, it may be considered as unlimited. The continuous method is, no doubt, preferable to the intermittent.

Mr. C. H. Braddon is thanked for his communication. The subject will be noticed in our next number.

Trauma.—By whom was the subject for a prize essay announced for competition?

Dr. W. Peel Nesbitt.—We cannot see any harm in the proposed circular, provided it be used with dignity.

Mr. G. P. Wills.—We do not remember the decision referred to by our correspondent.

D. M. R.—Dr. Green's small volume on the subject.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Simpson, Edinburgh; Dr. Morrell Mackenzie, London; Dr. Whitmore, London; Mr. Kenyon, Manchester; Mr. Burrows, Malton; Mr. Howland, Peterborough; Mr. Smith, Bedford; Mr. Menzies, Birkenhead; Mr. Johnston, Wakefield; Mr. Jones, Aberavon; Mr. M'Veagh, Coventry; Mr. Heaton, Abergavenny; Mr. Brown, Waltham; Mr. Morgan, Ipswich; Mr. George; Mr. Jameson, Redhill; Mr. Geary, Canton, U.S.A.; Mr. Nicholls, Chelmsford; Mr. Walton; Mr. R. Baker; Mr. Nankivell, Chatham; Mr. Stone, London; Mr. Hayden, Ormskirk; Mr. Whitefoord, London; Mr. White, Laroch; Mr. Taylerson, Whitby; Dr. Dougan, Lochgilphead; Dr. Hunter, Jedburgh; Mr. Seager, York; Mr. Goodsir, Edinburgh; Dr. Thompson, Vevay, U.S.A.; Mr. Dray, Newport; Dr. Finch, Colchester; Mr. Morrish, Liverpool; Mr. Waithman, Kidderminster; Mr. T. Mabey, Wallingford; Mr. Smith, Salford; Mr. G. Wright, Cambridge; Mr. Jollye, Donnington; Dr. Brierley, Manchester; Mr. Thorpe, Reigate; Mr. F. Manley, Loddon; Mr. Foster, Binfield; Mr. B. Howe, Manchester; Mr. Sandford, Oakham; Dr. Tibbits, London; Mr. C. S. Smith, Seaforth; Mr. Miller, Edinburgh; Mr. Turner, Halifax; Mr. Culford, Brighton; Mr. Barrett, Welshpool; Dr. Thomson, Fermoy; Mr. Jones, Merton; Mr. Reed, Bury St. Edmunds; Mr. Field, Preston; Mr. Hansard, Walsall; Mr. R. Nettlefold, London; Mr. J. Adams, Peckham; Mr. Russell, Barton; Mr. Maugham, Clapham; Dr. Browne, Devonport; Mr. Buchan, London; Dr. Hillyard, Holloway; Mr. Cooper, Hull; Mr. Salter, Ipswich; Mr. Morgan, London; Mr. Ford, Berwick; Mr. Hall, Richmond, U.S.A.; Mr. Chapman, Richmond-green; Mr. Roberts, Chester; Mr. Brook, Silverdale; Mr. Powell, Westenhanger; Mr. Hornedge, Hampton; Mr. Marsh, Newark-on-Trent; Mr. E. Watson, Paris; Mr. Longley, Andover; Mr. Betts, Sutterton; Mr. Danvey, Coleford; Mr. Porter, Rochester; Mr. Graham, Dublin; Mr. Nerton, Putney; Mr. Cheeves, Wansford; Mr. Ashurst, Sutton; Mr. Sherman, Manningtree; Mr. Hanyard, Brixton; Mr. T. Norfield, Coventry; Mr. J. R. James, Carnarvon; Mr. Burton, Granton; Mr. R. Jones, Coventry; Mr. Watkin, Galway; Mr. Carter, Clifton; Mr. James, London; Mr. Forbes, Glasgow; Mr. Grant, Fleetwood; Mr. Marsh, Birkenhead; Mr. Bartlam, Broseley; Mr. Mayhew, Glastonbury; Mr. Burls, Lincoln; Mr. Ensor, Fort Elizabeth, South Africa; Mr. Murdoch, Chichester; Mr. Ellis, Whitby; Mr. Fawcett, Dolgelley; Mr. Maudsley, Seaforth; Mr. Milligan, Keighley; Mr. Stephenson, Glasgow; The Registrar of the Royal College of Physicians; S. H. W.; An Ozonian and Old Epsomian; D. M. R.; R. Q.; W.; C. B.; Insect; M.R.C.S. Eng.; A Medical Student; L. D. C. B.; Trauma; &c. &c.

Penrith Observer, Ryde News, Western Mail, South Wales Daily News, Hampshire Advertiser, Jewish World, Public Health, Penrith Herald, and *Food, Water, and Air* have been received.

METEOROLOGICAL READINGS

(Taken by Stewart's Instruments).

THE LANCET OFFICE, AUGUST 7TH, 1873.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Aug. 1	30·08	W.	60	66	107	71	56	...	Fine
" 2	30·24	W.	57	60	115	77	53	...	Fine
" 4	30·14	W.	61	66	111	75	59	...	Overcast
" 5	30·00	W.	62	65	109	73	61	...	Overcast
" 6	29·94	W.	61	65	117	80	61	...	Overcast
" 7	30·17	N.W.	64	68	116	84	61	...	Fine

Medical Diary of the Week.

Monday, Aug. 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 3½ P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, Aug. 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Friday, Aug. 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 16.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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